IMPORTANT INFORMATION: Product must be installed and used in strict conformance with NFPA Pamphlet 58 and/or NFPA Pamphlet 54 and all other codes, regulations and manufacturer recommendations.

Failure to follow these codes, regulations and recommendations could result in hazardous installation, bodily injury and/or death.

PRODUCT TRAINING SCHOOLS AVAILABLE. Contact a GEC customer service representative for more information.

WARNING: LP Gas is extremely flammable and explosive. Devices used for handling LP Gas and Anhydrous Ammonia must be installed and used in strict conformance with NFPA Pamphlet 58 and 54 and all other codes, regulations and manufacturer recommendations.

Selecting the Correct Carburetor Size

Formulas for Cubic-Feet-Per-Minute (CFM) Air Flow Requirements. Determining specific airflow requirement for any engine requires only the application of the following formulas:

Naturally Aspirated Engines (Carbureted)

CID x RPM /1728/2 x .85 = CFM Required
The engine air-flow requirement determined by this formula is at 85% of volumetric efficiency for four-cycle engines. For two-cycle engines double the cubic feet/minute valve.

1. Determine the cubic inch displacement of the engine from the identification plate or the user's manual. (If the displacement is known in cubic centimeters, convert to cubic inches by multiplying cubic centimeters by .06102. If in liters, convert to cubic inches by multiplying liters by 61.02.)
2. Multiply the figure by the RPM figure corresponding to the maximum engine speed at wide open throttle. (Use the point at which the tachometer is redlined. If the engine is not equipped with a tachometer, refer to the user's manual supplied with the vehicle or engine.)
3. Divide this CIM (cubic inches per minute) by 1728 to obtain cubic feet per minute.
4. Divide the result by 2 (for 4 stroke engines).
5. Multiply the figure you obtain by .85 For 85% volumetric efficiency).
6. This figure is the precise air-flow requirement for the engine, accurate to one cubic foot/minute.

Example:

351 CID x 4000 RPM = 1,404,000 cubic inches per minute
1,404,000 /1728 = 812.5 CFM (2 stroke)
812.5/2 = 406.25 CFM (4 stroke)
406.25 x .85 = 345 CFM (at 85% volumetric efficiency.

Fuel Injected Engines

Due to improved intake manifold design, use 100% of volumetric efficiency for fuel injected engines.
CID x RPM /1728 /2 = CFM required.

Example:

351 CID x 4000 RPM = 1,404,000 CIM
1,404,000 /1728 = 812.5 CFM (2 stroke)
812.5 /2 = 406.25 CFM (4 stroke)
406.25 X 406.25 CFM (at 100% volumetric efficiency)

Turbocharged Engines

(with mixer upstream of turbocharger)
CID x RPM/1728 x 2 x % boost pressure + 1 = CFM Required

Normal air inlet pressure to the engine is 14.7 PSI (one atmosphere). Adding a turbocharger merely serves to increase the inlet pressure. For example, 6 PSI boost equates to 14.7 PSI plus 6 PSI, or a combined inlet pressure of 20.7 PSI (or 140% of one atmosphere) at sea level. Here is how this works starting with the above formula:

I. One atmosphere equals 14.7 PSI.
II. 6 PSI boost equals 40% of one atmosphere.
III. Thus you must multiply the normal CFM by 1.40 to establish the requirement for six pounds of boost pressure.

Example:

351 CID x 4000 RPM = 1404,000 CIM
1,404,000 /1728 = 812.5 CFM (2 stroke)
812.5 / 2 = 406.25 CFM (4 stroke)
406.25 x 1.4 = 568.75 CFM (at 6 PSI boost)

In selecting the correct carburetor or mixer from the listing, bear in mind whether the conversion is to be straight propane or dual fuel (propane and gasoline). All models listed are available for straight fuel or dual fuel applications.

Impco Carburetor (Mixer) Sizing

As It Relates to Air Flow

Vehicle Engine Applications
Wide Open Throttle 1 ½" Manifold Depression

Model #	Related Horse-Power	Cubic Feet/min.	Cubic Feet/hr.
50+55	56 HP	91	5,460
50-500	67 HP	108	6,480
100	106 HP	170	10,200
125	126 HP	202	12,120
175	130 HP	210	12,360
200	172 HP	276	16,560
225	205 HP	329	19,740
300A-1, 300A-20	217 HP	348	20,880
300A-50, 300A-70	270 HP	432	25,920
425	287 HP	460	27,600

Impco

Model J Series -100H.P. LP Gas

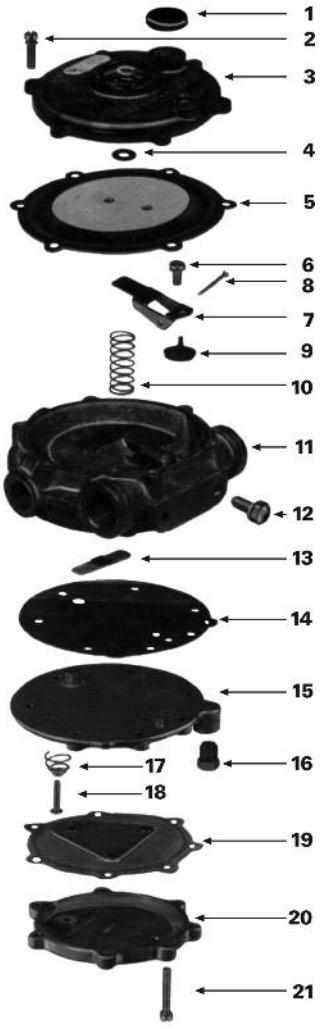
Ref. #	Part #	Description
1	S7-4	Screen, atmosphere vent (Model J only)
2	S1-59*	Screw, 8-32 x 5⁄8" SEMS (6)
3	AC1-34	Cover assy., secondary: C1-34, P1-10, S2-21, W1-27, S7-4
4	W1-27*	Washer, hand primer
5	AD1-26*	Diaphragm assy., secondary, hydrin: D1-26, P2-28, P2-27, R2-4 (2)
	AD1-27*	Diaphragm assy., secondary, hydrin: D1-27, P2-28, P2-27, R2-4 (2)
6	S1-42*	Screw, 8-32 x 3⁄8" SEMS
7	L1-37	Lever, secondary regulator
8	P1-8	Pin, secondary fulcrum
9	S4-27*	Seat, secondary regulator (new)
10	S2-35	Spring, blue secondary, standard
	S2-38**	Spring, orange secondary, optional
11	AB1-33	Body assy.: B1-33, J1-7, P3-14, J1-15
12	S1-5	Screw, 1⁄4" - 20 x 5⁄8" SEMS (2)
13	S4-16*	Seat, primary regulator
14	G1-85*	Gasket, body to plate
15	P2-26	Plate, converter body cover
16	P3-13	Plug, 1⁄8" pipe, hex head
17	S2-36	Spring, primary regulator
18	P1-14*	Pin, primary valve
19	AD1-22*	Diaphragm assy., primary: D1-22, P2-29, R2-3, (3), L1-36
20	C1-33	Cover, primary regulator
21	S1-10*	Screw, 8-32 x 1" SEMS (7)
22	V1-20***	Check valve
23	23-24***	Retainer ring

NOTES:

* Indicates repair kit components.

** Two vapor outlet pressures are available. Orange secondary spring gives negative ½" water column. Blue secondary spring gives negative 1 ½" water column. To change any JB converter to JO, change blue secondary spring to orange.

*** Not shown.



Repair Kits

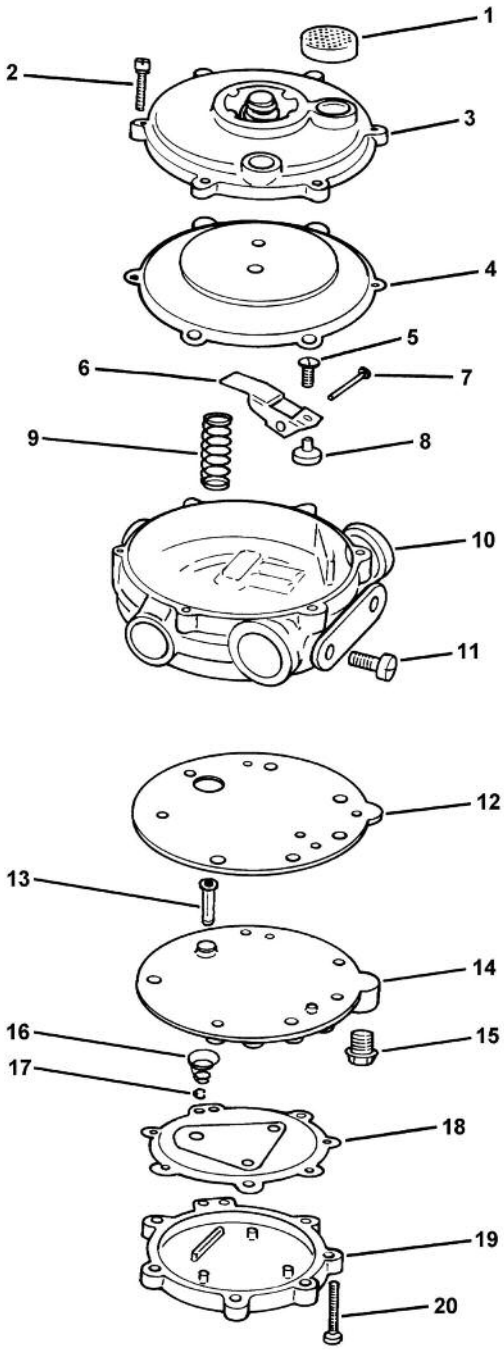
Part #	Description
RK - J	Buna
RK - J - 2	Silicone

Impco

Model COBRA Series

325 H.P. - LP Gas

Ref. #	Part #	Description
1	NSS	Screen, atmospheric vent
2	NSS	Screw, 8-32 x 7/8" Tork style (6)
3	NSS	Cover Assy, secondary
4	AD1-27-5	Diaphragm Ass, secondary, flourosilicone
5	NSS	Screw, 8-32 x 1/2" Tork style
6	L1-37	Lever, secondary
7	P1-8	Pin, secondary fulcrum
8	S4-27*	Seal, secondary
9	S2-35	Spring, blue secondary, -0.37 kPa standard
	S2-38	Spring, orange secondary, -0.12 kPa optional
10	NSS	Body assy, with jet
11	NSS	Plug, vapor outlet
12	S1-5	Screw, 1/4-20 x 5/8" (2)
13	NSS	Pin, valve primary
14	NSS	Plate, body cover
15	P3-13	Plug, 1/8 NPT hex head
16	NSS	Spring, primary
17	NSS	E-ring, external
18	NSS	Diaphragm assy, primary
19	NSS	Cover, primary
20	NSS	Screw, 8-32 x 1-1/8" Tork style (7)



NSS = Not Serviced Separately
*Included in Repair Kit

Repair Kits

Part #	Description
RK - Cobra	Repair Kit

Impco

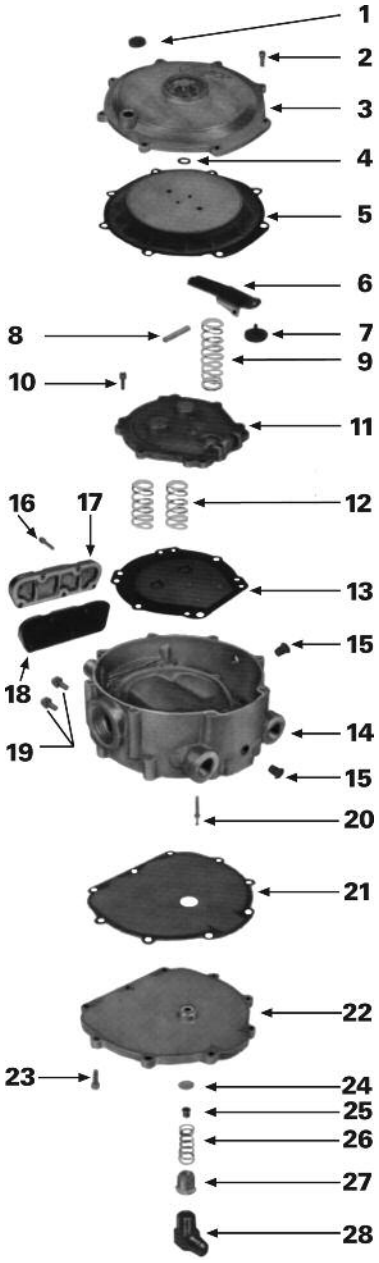
Model L Series

325 H.P. - LP Gas

Ref. #	Part #	Description
1	S7-1	Screen, atmosphere vent
2	S1-59*	Screw, 8-32 x 5⁄8" SEMS (8)
3	AC1-63	Cover assy., secondary: C1-63, P1-10, S2-21, W1-27, S7-4
4	W1-27*	Washer, hand primer
5	AD1-30*	Diaphragm assy., secondary, hydrin: D1-30, P2-16, P2-34, R2-4 (2)
	AD1-31*	Diaphragm assy., secondary, hydrin: D1-31, P2-16, P2-34, R2-4 (2)
6	L1-56	Lever, secondary
7	S4-25*	Seat, secondary (new)
8	P1-7	Pin, secondary lever fulcrum
9	S2-97	Spring, secondary regulator (blue)
10	S1-59	Screw, 8-32 x 3⁄8" SEMS (6)
11	C1-62	Cover, primary diaphragm
12	S2-92	Spring, primary regulator (2)
13	AD1-32*	Diaphragm assy., primary: D1-32, P2-35, P2-36, R2-10 (2)
14	AB1-57	Body assy.: B1-57, J1-18
15	P3-13	Plug, 1⁄8" pipe, hex head (2)
16	S1-59*	Screw, 8-32 x 5⁄8" SEMS (5)
17	C1-61	Cover, water passage
18	G1-118*	Gasket, water passage
19	S1-5	Screw, 1⁄4"-20 x 5⁄8" SEMS (2)
20	P1-34	Pin, primary valve
21	G1-119	Gasket, vaporizing chamber
22	AC1-64	Cover, vaporizing chamber: C1-64, J1-17
23	S1-3*	Screw, 10-24 x 5⁄8" SEMS (9)
24	S4-18	Seat, primary
25	S4-23*	Seat support, primary
26	S2-93*	Spring, primary valve
27	ASH-23-18	Bushing assy., fuel inlet: B3-25, R1-41
28	AF4-22	Fuel inlet, 3⁄8" flare x 3⁄8" NPT, 90º, w/retainer (optional)

NOTES:
In colder climates, the Model L vaporization capacity will be reduced by 20% during WOT operation. Due to lower rate of water flow in industrial application, Model L is rated at 200 H.P. in these installations.

* Indicates repair kit components.



Repair Kits

Part #	Description
RK - L	Buna
RK - L - 2	Silicone

Impco

Model E & PE Series

325 H.P. LP Gas - 200 H.P. Ratings

Ref. #	Part #	Description
1	S7-1	Screen, atmosphere vent
2	S1-3*	Screw, 10-24 x 5⁄8" SEMS (8)
3	AC1-22-1	Cover assy., secondary: C1-22, P1-10, S2-21, W1-27, S7-4
4	W1-27*	Washer, hand primer
5	AD1-14-1*	+ Diaphragm assy., secondary, hydrin: D1-14-1, P2-16 (2), L2-1, R2-3 (2)
	AD1-23*	+ Diaphragm assy., secondary, hydrin: D1-23, P2-16 (2), L2-1, R2-3 (2)
6	AL1-86	Lever, secondary
7	S4-25*	Seat, secondary (new)
8	S2-22	Spring, secondary regulator (blue), standard
	S2-23***	Spring, secondary regulator (orange), optional
9	P1-7	Pin, secondary lever fulcrum
10	S1-40*	Screw, 10-24 x 3⁄8" SEMS (2)
11	S1-39*	Screw, 12-24 x 7⁄8" SEMS (7)
12	C1-20	Cover, primary diaphragm
13	S2-13	Spring, primary regulator (2)
14	AB1-57	Body assy.: B1-57, J1-18
15	P3-13	Plug, 1⁄8" pipe, hex head (2)
16	S1-59*	Screw, 8-32 x 5⁄8" SEMS (5)
17	C1-61	Cover, water passage
18	G1-118*	Gasket, water passage
19	S1-5	Screw, 1⁄4"-20 x 5⁄8" SEMS (2)
20	P1-34	Pin, primary valve
21	G1-119	Gasket, vaporizing chamber
22	AC1-64	Cover, vaporizing chamber: C1-64, J1-17
23	S1-3*	Screw, 10-24 x 5⁄8" SEMS (9)
24	S4-18	Seat, primary
25	S4-23*	Seat support, primary

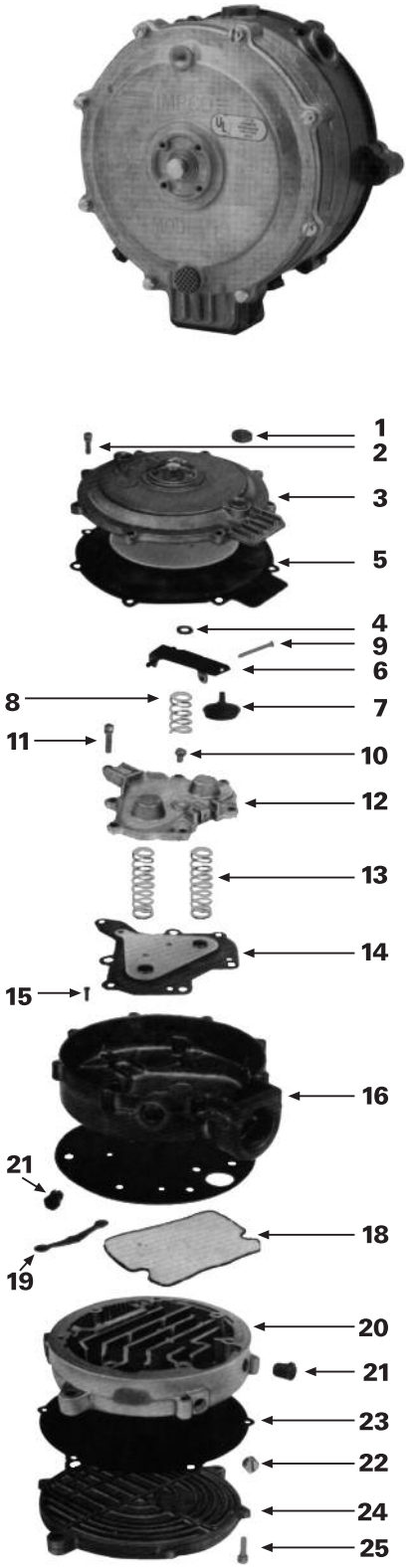
NOTE 1:

** Two vapor outlet pressures are available. Orange secondary spring gives negative ½" water column. Blue secondary spring gives negative 1 ½" water column. To change any B regulator to O, change blue secondary spring to orange. Due to lower rate of water flow in industrial applications, Model E is rated at 200 H.P. in these installations.

* Indicates repair kit components.

\+ For Model E only

NOTE 2: PE Series does not carry UL approval.



Repair Kits

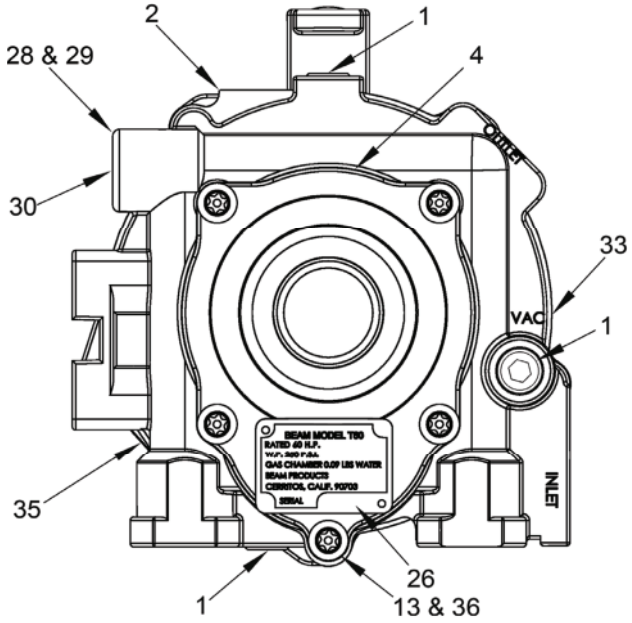
Part #	Description
RK - E	Buna
RK - E - 2	Silicone

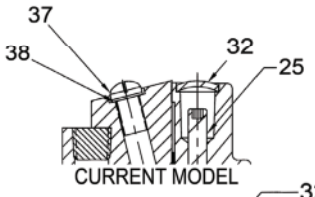
Impco

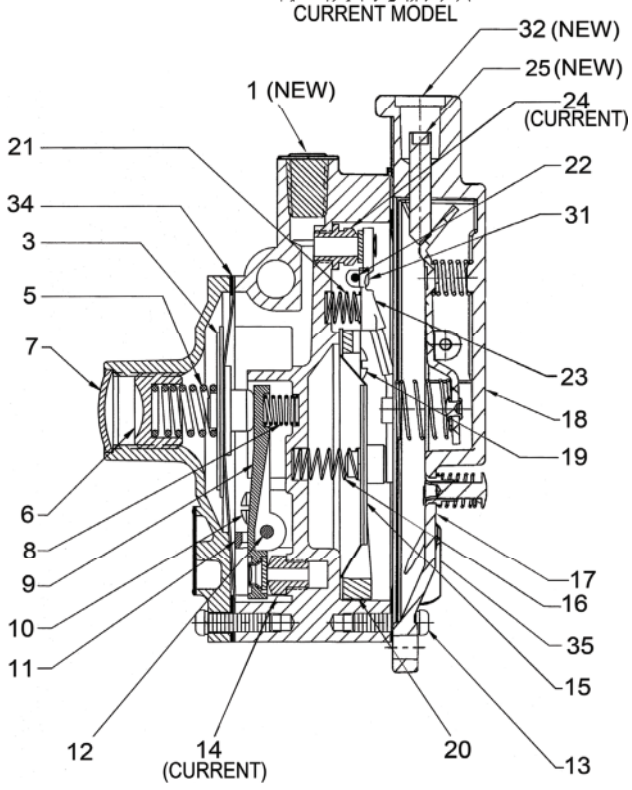
Model T60 Regulator

Item #	Part #	Description
1	P316699-001	Plug, 1/8 Socket Head Steel (New)
	P3-13	Plug, 1/8-27 NPT* (1) (Current)
2	NSS	Casting, Regulator Body
3	NSS	Diaphragm Assembly* (1) (2)
4	NSS	Cover, Primary Regulator
5	NSS	Spring, Primary* (1)
6	NSS	Screw, Retainer Adjustabel Spring
7	P3-17956-8	Plug, Expansion* (1) (2)
8	60-4	Spring, Primary Lever* (1)
9	NSS	Lever Assy, Primary* (1) (2)
10	NSS	Screw, FIL HD, 10-32 UNF-2A x .31 L (Current)
	NSS	Screw, M5 x 0.8 7.9 FIL HD, Torx (New)
11	NSS	Bridge, Primary
12	NSS	Pin, Primary Pivot* (1)
13	NSS	Screw, 10-32 x .62 Torx* (1)
	NSS	Screw, Torx Tamp Res M5 x 16mm (New)
14	NSS	Orifice, Primary Regulator (Current)
15	60-15A	Diaphragm Assembly, Vac Lock* (1) (2)
16	NSS	Spring, Vac Lock* (1)
17	60-22A	Diaphragm, Secondary* (1) (2)
18	AC1-50001-004	Cover Assy (Current)
	AC1-500001-004A	Cover Assy W/Primer (Current)
	AC1-51985-001	Cover Assy (New)
	AC1-51985-001A	Cover Assy W/Primer (New)
	AC1-50001-001A	Cover Assy W/Primer & Mounting Tabs (New)
	AC1-50001-003	Cover Assy W/Mounting Tabs (New)
19	NSS	Screw, Pan HD 10-32 x .38* (1)
		Screw, Torx Tamp Res M5 x 16mm (New)
20	60-16	Ring, Vac Lock
21	NSS	Spring, Secondary Lever* (1)
22	NSS	Pin, Secondary Pivot* (1)
23	AL1-51097	Lever Assy, Secondary* (1) (2) (Current)
	60-19B	Lever Assy, Secondary (New)
24	NSS	Orifice, Secondary Regulator (Current)
25	S1-17367	Screw, Adjustment* (1)
	NSS	Screw, Adjustment (New)
26	NSS	Label
27	NSS	Deleted
28	400-25	Plug, Relief* (1) (2) (Current)
	P3-50929-001	Plug, Freeze .50 Dis. x .38 (New)
29	G-25	Gasket, Plug* (1) (2) (Current)
30	NSS	Plug, Water Core
31	NSS	Screw, Pan HD, 10-32 UNF-2A x .25 L* (1)
		Screw, Torx Tamp Res M5 x 16mm (New)
32	P3-17956-1	Plug, Expansion* (1) (2)
33	NSS	Label, Warning* (1) (2)
34	NSS	Gasket, Diaphragm* (1) (2)
35	NSS	Label, Ident-Silver
36	W1-5	Washer, Split Lock* (1) (Current)
37	NSS	Screw, FIL HD 1/4-28 UNF-2A* (1) (Current)
38	NSS	Washer, Copper-Special

NSS=Not Sold/Serviced Separately
*Repair Kit: (1)=T60-RBK; (2)=T60-RK

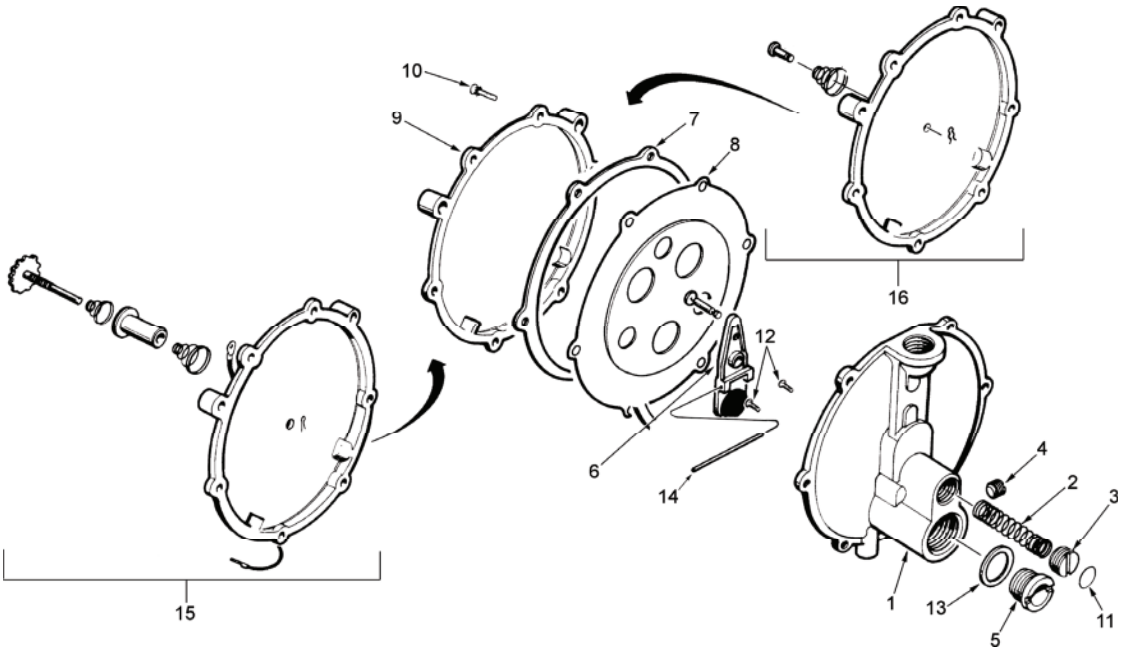






Impco

Model KN Regulator



Components

Item #	Part #	Description	Qty
1	NSS	Body, Regulator Model KN	1
2	039-00-12	Spring, 4 Oz. Model KN (Red)	1
	039-00-13	Spring, 4 Oz. Model KN (Green)	
3	NSS	Screw, Adjusting	1
4	NSS	Fitting, 1/8 NPT Hex Sch Plug	1
5	NSS	Orifice, 1/2" Id, KN Regulator	1
6	NSS*	Lever & Seal Assy	1
7	NSS*	Gasket, Secondary Diaphragm	1
8	NSS*	Diaphragm, Assy Reg Vmq Mod KN	1
9	NSS	Cover, Regulator Diaphragm Mod KN	1
10	NSS*	Screw, 10-32 x 5/8 Torx Pan Stlzn	6
11	P3-17956-10*	Plug, Expansion	1
12	NSS*	Screw, 4-40 x 1/4 Torx Ph Tt Stlzn	2
13	NSS	Gasket, Orifice	1
14	NSS*	Pin, Pivot	1
15	039-00-52	Cover, Auto Prime Assy	1
16	NSS	Cover, Manual Prime Assy	1

*Included in Repair Kit 039-99

Options & Accessories

Part #	Description	Qty
039-00-12	Spring, 4 Oz. Model KN (Red)	1
039-00-13	Spring, 6 Oz. Model KN (Green)	1
039-00-41	Pin, Primer Mod KN	1
039-00-42	Spring, Primer .38" O.D. .19"I.D. .02"	1
039-99	Repair Kit, KN	1
039-00-43	Clip, Primer Pin	1

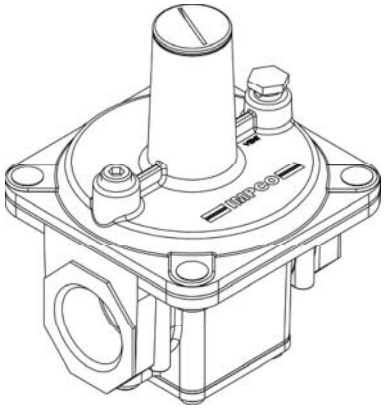
Impco

Model IMP Series Regulators

for Natural & LP Gas

The IMPCO IMP Series of Regulators are low pressure, dry gas regulators intended for use with propane or natural gas. Typical applications include all types of stationary, gas-fired appliances and equipment utilizing a low-pressure gas supply.

The IMP Series regulators feature a unique concical valve design, which permits low resistance straight-through flow. This design provides high flow at low pressures and enable the regulator to handle large capacity appliances with limited supply pressure.



Regulator	Fuel Type	Inlet Pressure Max	Outlet Pressure	HP/kW	Operating Temperature Range	Fuel Filtration	Mounting Postition	Applications
IMP52	LPG Vapor or Natural Gas	20" w.c.	3" to 6" w.c.	100 hp	-40°F to +250°F	40 micron	Vertical	Stationary and Industrial
IMP53				180 hp				
IMP61				350 hp				
IMP81				550 hp				
IMP91				850 hp				

Impco

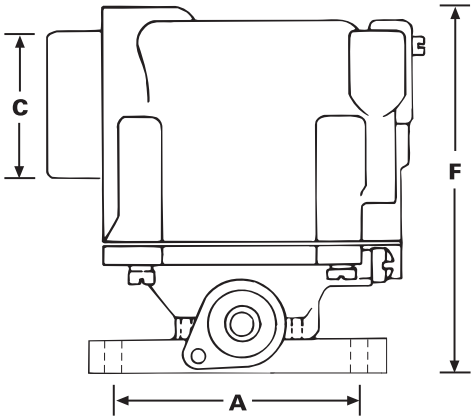
Model CA55

Standard Series Carburetors for Natural & LP Gas

Impco's CA55 Series carburetors are offered in four design variations, providing proven, effective solutions for optimum metering and delivery of either alternative fuel or, in dualfuel configurations, gasoline in engines up 75 horsepower.

The standard model, shown beginning on this page, can be mounted in either an updraft or downdraft orientation, feeding either LPG or natural gas to engines from 1.5 to 70 horsepower. The maximum flow rate is 115 cfm. Various SAE flanges and airhorn sizes are available.

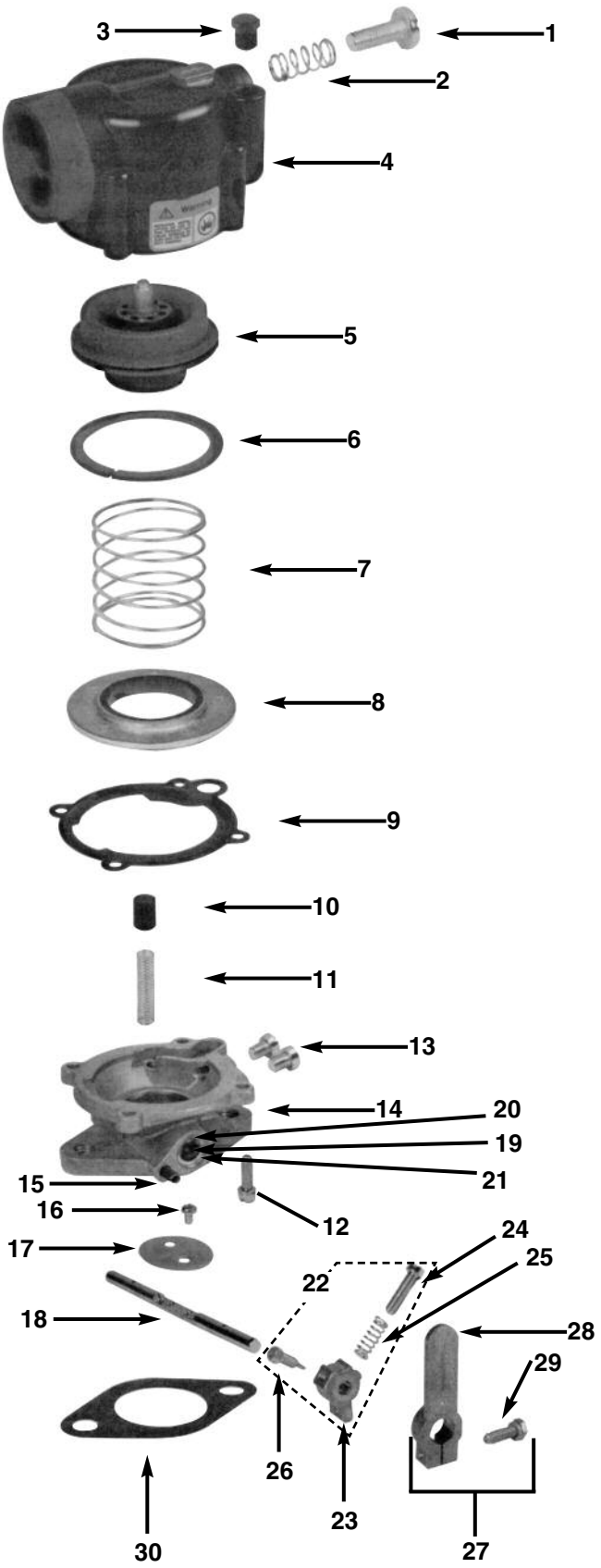
Standard Carburetor	Mixer	Throttle Body	SAE Flange (in.)	NPT Fuel Inlet (in.)	A Center-to-Center Bolt Spacing (in.)	C Mixed Air Horn Diameter	F Overall Height
CA55-4	CA55M-2	AT2-25	3/4	3/8	2 1/4	1 5/8	3 3/4
CA555-6	CA55M-4	AT2-26	1		2 3/8	1 7/8	
CA55-8	CA55M-5	AT2-27	1 1/4		2 11/16	2 1/16	
CA55-10	CA55M-3	AT2-26	1		2 3/8	1 3/4	
CA55-12	CA55M-1	AT2-25	3/4		2 1/4	1 1/2	
CA55-14		AT2-26	1		2 3/8		
CA55-20	CA55M-2					1 5/8	
CA55-40	CA55M-5					2 1/16	
CA55-40-2							
CA55-58	CA55M-3					1 3/4	
CA55-64	CA55M-2					1 5/8	
CA55-66							



Impco

Model CA55 Standard Series

Ref. #	Part #	Description
1	S1-74	Idle screw
2	S2-88	Spring, idle screw
3	P3-13	Plug, 1⁄8” pipe
4	AB1-35-1C	1 1⁄2” air horn assy.: B1-35, V2-29, W1-14, W1-15, W1-43, P3-8
	AB1-35-2C	1 5⁄8” air horn assy.: B1-35, V2-29, W1-14, W1-15, W1-43, P3-8
	AB1-35-3C	1 7⁄8” air horn assy.: B1-35, V2-29, W1-14, W1-15, W1-43, P3-8
	AB1-35-4C	2 1⁄16” air horn assy.: B1-35, V2-29, W1-14, W1-15, W1-43, P3-8
	AB1-35-5C	1 3⁄4” air horn assy.: B1-35, V2-29, W1-14, W1-15, W1-43, P3-8
5	AV1-14925	Air valve assy. (std.): S4-12, V2-30, V1-14694-1, W1-14697
	AV1-14926	Air valve assy. (lean): S4-12, V2-30, V1-14694-2, W1-14697
6	R1-14698	Sealing ring, air valve
7	S2-45	Spring, air valve
8	AP2-14700	Check-valve plate assy.: P2-14699, B3-14692
9	G1-92	Gasket, throttle body to mixer
10	P4-1	Piston, idle cut-off
11	S2-44	Spring, idle cut-off
12	S1-3	Screw, 10-24 x 5⁄8” SEMS (4)
13	S1-69	Screw, 1⁄4”-28 x 5⁄16” (2)
14	T2-24	Throat, 1⁄2” SAE flange
	T2-25	Throat, 3⁄4” SAE flange
	T2-26	Throat, 1” SAE flange
	T2-27	Throat, 1 1⁄4” SAE flange
15	P1-5	Pin, throttle stop
16	S1-22	Screw, 6-32 x 1⁄4” SEMS (2)
17	F2-13	Fly, 1⁄2”
	F2-1	Fly, 3⁄4”
	F2-2	Fly, 1”
	F2-5	Fly, 1 3⁄4”
18	S5-6	Throttle shaft, 1⁄4” diameter
19	B2-11	Bearing, Oilite, 1⁄2” i.d. (2)
	B2-6	Bearing, needle, 1⁄4” i.d. optional (2)
20	S3-8	Seal, 1⁄4” shaft (2)
21	R1-9	Ring, seal retainer
22	AL1-8-1	Throttle stop assy., 1⁄4” i.d.: L1-8-1, S2-15, S1-21, S1-18
23	L1-8	Throttle stop lever
24	S1-21	Stop screw, 10-32 x 3⁄4”
25	S2-15	Spring, idle stop screw
26	S1-18	Pin screw, throttle stop
27	AL1-7-1	Throttle lever, w/screw S1-17, L1-7-1
28	L1-7-1	Throttle lever
29	S1-17	Screw, 10-24 x 5⁄8”
30	G1-91	Gasket, 1⁄2” flange
	G1-16	Gasket, 3⁄4” flange
	G1-17	Gasket, 1” flange
	G1-18	Gasket, 1 1⁄4” flange

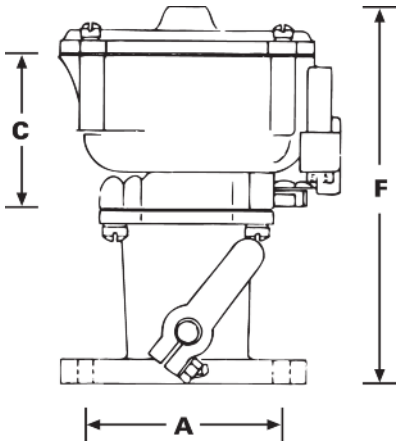


Impco

Model 100 Series Natural, LP Gas

Standard Carburetors

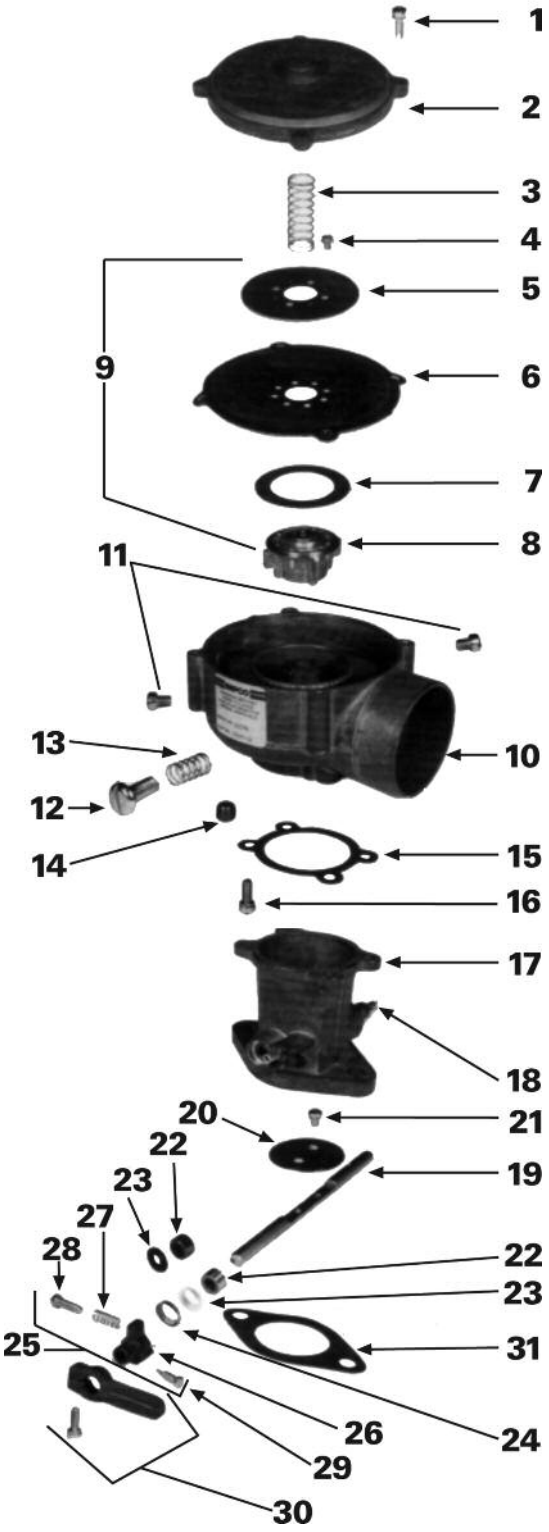
Standard Carburetor	Mixer	Throttle Body	A Center-to-Center Bolt Spacing (in.)	C Mixed Air Horn Diameter	F Overall Height
CA100-2	CA100M-1	AT2-1	2 1/4	1 1/2	4 5/8
CA100-4		AT2-2	2 3/8		
CA100-6	CA100M-2			1 7/8	
CA100-8	CA100M-3	AT2-3	2 11/16	2 1/16	5 7/8
CA100-10	CA100M-4			2 5/16	
CA100-12		AT2-4-1	2 15/16		6 1/16
CA100-26	CA100M-3	AT2-2	2 3/8	2 1/16	4 5/8
CA100-44	CA100M-1	AT2-3	2 11/16	1 1/2	5 7/8
CA100-45	CA100M-2			1 7/8	
CA100-46	CA100M-4	AT2-4-3	3 5/16	2 5/16	6
CA100-58	CA100M-5	AT2-1	2 1/4	1 5/8	4 5/8



Impco

Model 100 Series

Ref. #	Part #	Description
1	S1-3	Screw, 10-24 x 5⁄8” SEMS (4)
2	C1-17	Cover
3	S2-85	Spring, air valve
4	S1-22	Screw, 6-32 x 1⁄4” SEMS (4)
5	P2-22	Plate, backup
6	D1-17	Diaphragm
	D1-17-2	Diaphragm, silicone
7	R1-19	Ring, air valve
8	BV1-14	Air gas valve assy.: V1-14, S4-12, V2-7
9	AV1-14	Valve and diaphragm assy., complete (refer to chart for correct air gas valve assembly)
10	AB1-8-1 to -5	Body assy.: B1-8, V2-6, W1-12, W1-13, W1-14, R1-12, P3-8, S1-69
11	S1-69	Screw, 1⁄4”-28 x 5⁄16” (3)
12	S1-74	Screw idle
13	S2-88	Spring, idle screw
14	P3-3	Plug, 1⁄8” pipe, brass
15	G1-11	Gasket, throttle body to mixer
16	S1-19	Screw, 12-24 x 5⁄8” SEMS (4)
17	T2-1	Throat, 3⁄4” SAE flange
	T2-2	Throat, 1” SAE flange
	T2-3	Throat, 1 1⁄4” SAE flange
	T2-4-1	Throat, 1 1⁄2” SAE flange
	T2-4-3	Throat, 1 3⁄4” SAE flange
	T2-16	Throat, 1 1⁄4” & 1 1⁄2” SAE flange, short
	T2-23	Throat, 1 1⁄4” SAE flange, short
18	P1-5	Pin, throttle stop (2)
19	S5-1	Throttle shaft, 1⁄4” dia. (T2-1, T2-2)
	S5-2	Throttle shaft, 5⁄16” dia. (T2-3, T2-4-1, T2-4-3, T2-16, T2-23)
20	F2-1	Fly, 3⁄4”
	F2-2	Fly, 1”
	F2-3	Fly, 1 1⁄4”
	F2-4	Fly, 1 1⁄2”
	F2-5	Fly, 1 3⁄4”
21	S1-22	Screw, 6-32 x 1⁄4” SEMS (2)
	S1-12	Screw, 8-32 x 5⁄16” SEMS (2)
22	B2-11	Bearing, Oilite, 1⁄2” i.d. (2)
	B2-12	Bearing, Oilite, 5⁄16” i.d. (2)
	B2-6	Bearing, needle, 1⁄4” i.d. optional (2)
	B2-7	Bearing, needle, 5⁄16” i.d. optional (2)
23	S3-8	Seal, 1⁄4” shaft (2)
	S3-9	Seal, 5⁄16” shaft (2)
	S3-25	Seal, internal 5⁄16” i.d., optional (2)
24	R1-9	Ring, seal retainer (2)
25	AL1-8-1	Throttle stop assy., 1⁄4” i.d.: L1-8-1, S2-15, S1-21, S1-18
	AL1-8-2	Throttle stop assy., 5⁄16” i.d.: L1-8-2, S2-15, S1-21, S1-18
26	L1-8-1	Throttle stop lever 1⁄4” i.d.
	L1-8-2	Throttle stop lever 5⁄16” i.d.
27	S2-15	Spring, idle stop screw
28	S1-21	Screw, 10-32 x 3⁄4”
29	S1-18	Pin screw, throttle stop
30	AL1-7-3	Throttle lever, short, w/screw S1-1, L1-7-3
	AL1-7-1	Throttle lever, long, w/screw S1-1, L1-7-1
31	G1-16	Gasket, 3⁄4” flange
	G1-17	Gasket, 1” flange
	G1-18	Gasket, 1 1⁄4” flange
	G1-19	Gasket, 1 1⁄2” flange
	G1-23	Gasket, 1 3⁄4” flange
	G1-66	Gaskets, 1 1⁄4” - 1 1⁄2” flange

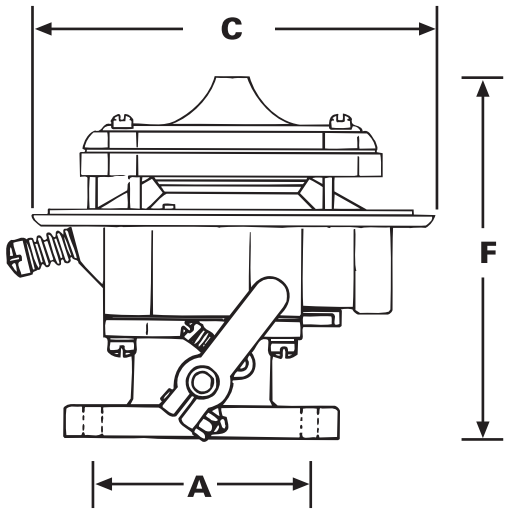


Impco

Model 125 Series

Natural, LP Gas

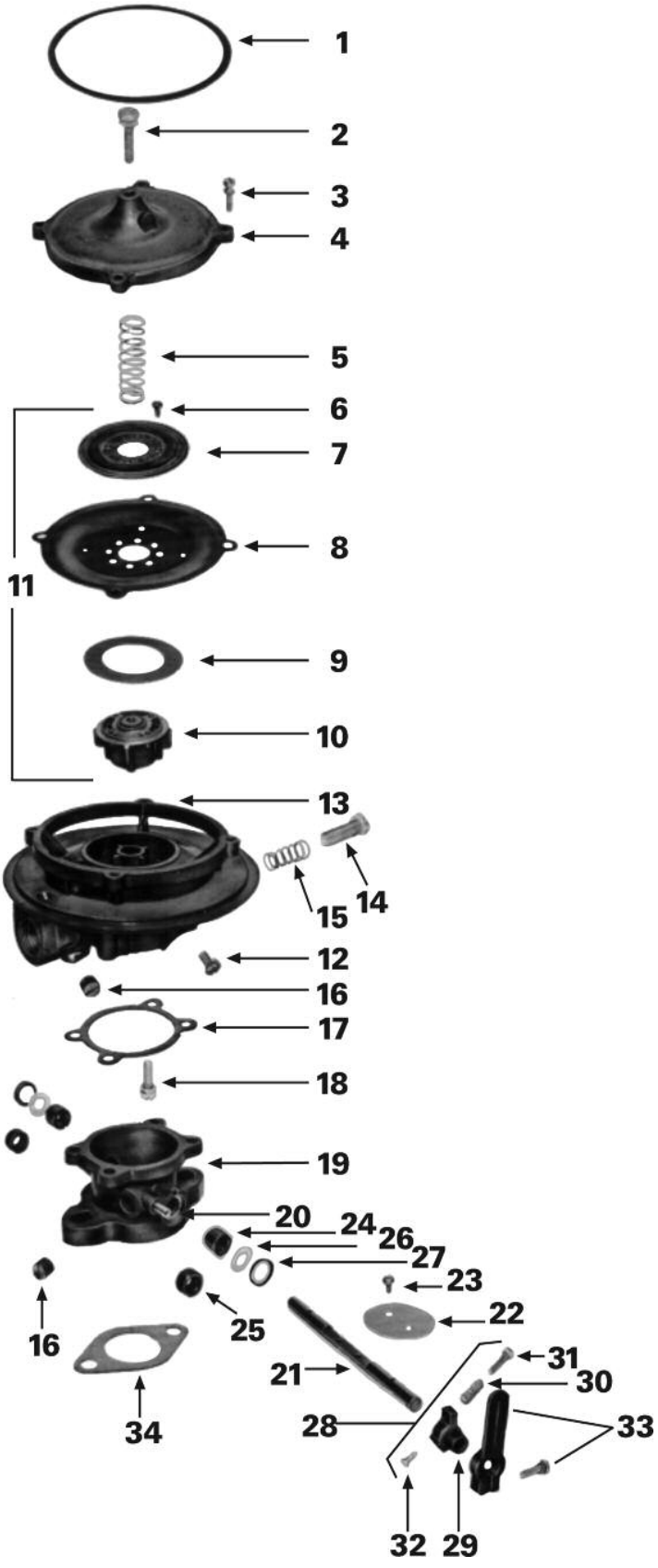
Standard Carburetor	Mixer	Throttle Body	A Center-to-Center Bolt Spacing (in.)	C Mixed Air Horn Diameter	F Overall Height
CA125-2	CA125M	AT2-2	2 3/8	2 15/16	5 9/16
CA125-6		AT2-16-1	2 13/16		
CA125-12				2 5/8	
Additional Standard Throttle Bodies					
		AT2-1	2 1/4		
		AT2-3	2 11/16		
		AT2-4-1	2 15/16		
		AT2-23	1 1/4 x 2 11/16		



Impco

Model 125 Series

Ref. #	Part #	Description
1	G1-66	Gasket, mixer to air horn
2	S1-47	Screw, 1/4"-20 x 1" SEMS
3	S1-3	Screw, 10-24 x 5/8" SEMS (4)
4	C1-26	Cover, air valve
5	S2-85	Spring, air valve
6	S1-22	Screw, 6-32 x 1/4" SEMS (4)
7	P2-22	Plate, backup
8	D1-17	Diaphragm
	D1-17-2	Diaphragm, silicone
9	R1-19	Ring, air valve
10	BV1-14	Air gas valve assy.: V1-14, S4-12, V2-7
11	AV1-14	Valve and diaphragm assy., complete (refer to chart for correct air gas valve assembly)
12	S1-69	Screw, 1/4"-28 x 5/16" (3)
13	AB1-25	Body assy.: B1-25, V2-6, W1-12, W1-13, W1-14
14	S1-28	Idle screw
15	S2-16	Spring, idle screw
16	P3-3	Plug, 1/8" pipe, brass
17	G1-11	Gasket, throttle body to mixer
18	S1-19	Screw, 12-24 x 5/8" SEMS (4)
19	T2-1	Throat, 3/4" SAE flange
	T2-2	Throat, 1" SAE flange
	T2-3	Throat, 1 1/4" SAE flange
	T2-4-1	Throat, 1 1/2" SAE flange
	T2-4-3	Throat, 1 3/4" SAE flange
	T2-16	Throat, 1 1/4" & 1 1/2" SAE flange, short
	T2-23	Throat, 1 1/4" SAE flange, short
20	P1-5	Pin, throttle stop (2)
21	S5-1	Throttle shaft, 1/4" dia. (T2-1, T2-2)
	S5-2	Throttle shaft, 5/16" dia. (T2-3, T2-4-1, T2-4-3, T2-16, T2-23)
22	F2-1	Fly, 3/4"
	F2-2	Fly, 1"
	F2-3	Fly, 1 1/4"
	F2-4	Fly, 1 1/2"
	F2-5	Fly, 1 3/4"
23	S1-22	Screw, 6-32 x 1/4" SEMS (2)
	S1-12	Screw, 8-32 x 5/16" SEMS (2)
24	B2-11	Bearing, Oilite, 1/2" i.d. (2)
	B2-12	Bearing, Oilite, 5/16" i.d. (2)
25	B2-6	Bearing, needle, 1/4" i.d. optional (2)
	B2-7	Bearing, needle, 5/16" i.d. optional (2)
26	S3-8	Seal, 1/4" shaft (2)
	S3-9	Seal, 5/16" shaft (2)
	S3-25	Seal, internal 5/16" i.d., optional (2)
27	R1-9	Ring, seal retainer (2)
28	AL1-8-1	Throttle stop assy., 1/4" i.d.: L1-8-1, S2-15, S1-21, S1-18
	AL1-8-2	Throttle stop assy., 5/16" i.d.: L1-8-2, S2-15, S1-21, S1-18
29	L1-8-1	Throttle stop lever 1/4" i.d.
	L1-8-2	Throttle stop lever 5/16" i.d.
30	S2-15	Spring, idle stop screw
31	S1-21	Screw, 10-32 x 3/4"
32	S1-18	Pin screw, throttle stop
33	AL1-7-3	Throttle lever, short, w/screw S1-1, L1-7-3
	AL1-7-1	Throttle lever, long, w/screw S1-1, L1-7-1
34	G1-16	Gasket, 3/4" flange
	G1-17	Gasket, 1" flange
	G1-18	Gasket, 1 1/4" flange
	G1-19	Gasket, 1 1/2" flange
	G1-23	Gasket, 1 3/4" flange
	G1-66	Gaskets, 1 1/4" - 1 1/2" flange



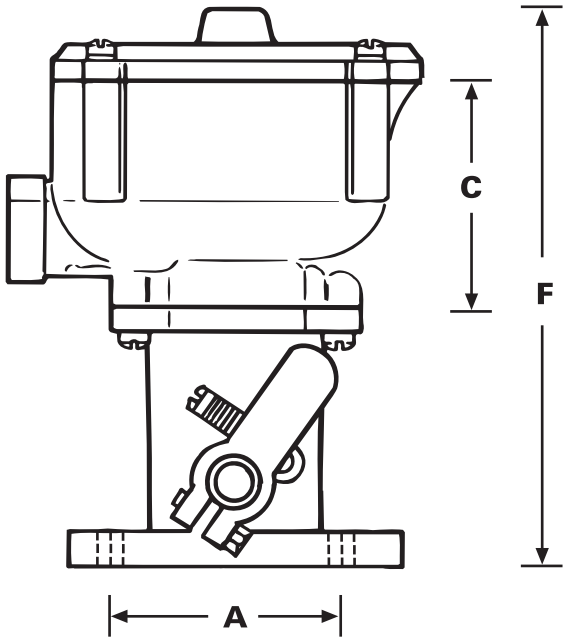
Impco

Model 200 Series - Natural & LP Gas

Standard Carburetors

Standard Carburetor	Mixer	Throttle Body	A Center-to-Center Bolt Spacing (in.)	C Mixed Air Horn Diameter	F Overall Height
200-2	200M-1	AT2-4-2	2 15/16	2 5/8	6 7/8
200-4		AT2-5	3 5/16		7 3/8
200-6	200M-2	AT2-6	3 9/16	3 1/16	
200-8		AT2-5	3 5/16		
200-10		AT2-6	3 9/16	2 5/8	
DG200-2	DG200-1	AT2-4-2	2 15/16		6 7/8
DG200-4		AT2-5	3 5/16		7 3/8
DG200-6	DG200-2	AT2-6	3 9/16	3 1/16	
DG200-8		AT2-5	3 5/16		

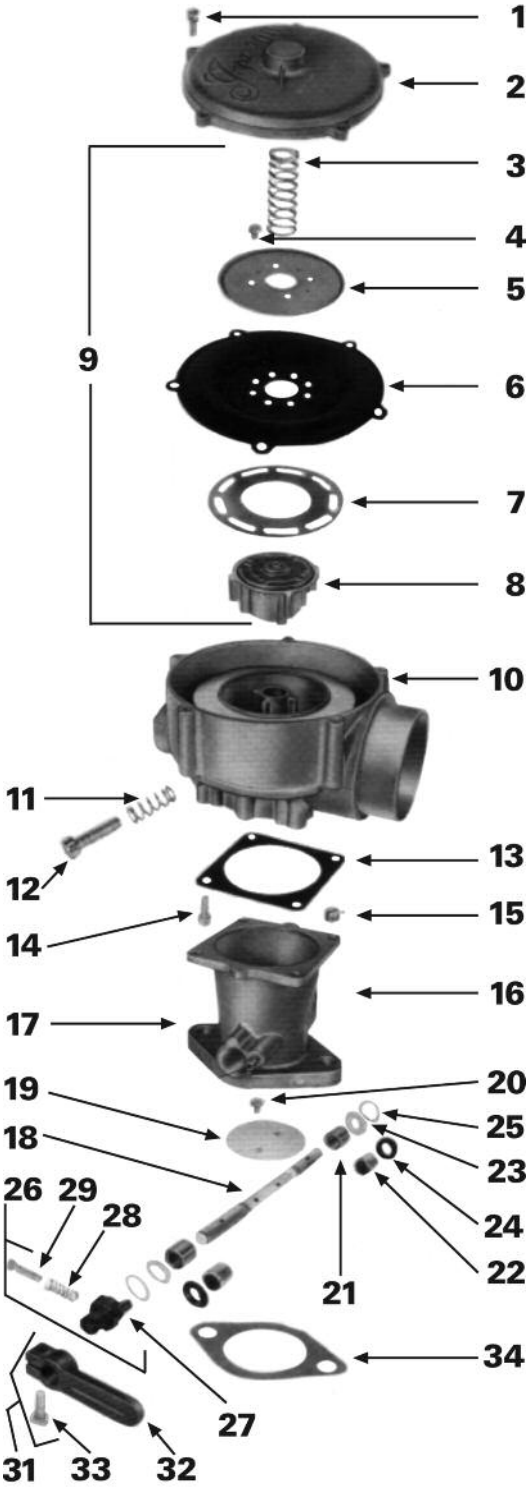
NOTE: (1) DG (digester gas) carburetors reduce air flow 30%



Impco

Model 200 Series

Ref. #	Part #	Description
1	S1-3	Screw, 10-24 x 5⁄8” SEMS (4)
2	C1-18	Cover
3	S2-17	Spring, air valve
4	S1-12	Screw, 8-32 x 5⁄16” SEMS (4)
5	P2-21	Plate, backup
6	D1-16-1	Diaphragm
	D1-16-2	Diaphragm, silicone
7	R1-17	Ring, air valve
8	BV1-12	Air gas valve assy.: V1-12, S4-9, V12-16
9	AV1-12	Air gas valve assy., complete with diagram, (refer to chart for correct air gas valve assy.)
10	AB1-11-1	Body assy., 2 5⁄8” air horn: B1-11-1, V2-10, W1-18, W1-19, W1-20, R1-13
	AB1-11-2	Body assy., 3 1⁄16” air horn: B1-11-2, V2-10, W1-18, W1-19, W1-20, R1-13
11	S1-69	Spring, idle screw
12	S1-28	Idle screw
13	G1-21	Gasket, throttle body to mixer
14	S1-19	Screw, 12-24 x 5⁄8” SEMS (4)
15	P3-3	Plug, 1⁄8” pipe, brass
16	T2-4-2	Throat, 1 1⁄2” SAE flange
	T2-5	Throat, 1 1⁄4” SAE flange
	T2-6	Throat, 2” SAE flange
17	P1-5	Pin, throttle stop (2)
18	S5-2	Throttle shaft, 5⁄16” diameter (T2-4-2)
	S5-3	Throttle shaft, 3⁄8” diameter (T2-5, T2-6)
19	F2-4	Fly, 1 1⁄2”
	F2-5	Fly, 1 3⁄4”
	F2-6	Fly, 2”
	T2-16	Throat, 1 1⁄4” & 1 1⁄2” SAE flange, short
	T2-23	Throat, 1 1⁄4” SAE flange, short
20	S1-12	Screw, 8-32 x 5⁄16” SEMS (4)
21	B2-12	Bearing, Oilite, 5⁄16” i.d. (2)
	B2-13	Bearing, Oilite, 3⁄8” i.d. (2)
22	B2-7	Bearing, needle, 5⁄16” i.d. optional (2)
	B2-8	Bearing, needle, 3⁄8” i.d. optional (2)
23	S3-9	Seal, 5⁄16” shaft (2)
	S3-11	Seal, 3⁄8” shaft (2)
24	S3-20	Seal, internal, 3⁄8” i.d. optional
25	R1-9	Ring, seal retainer, 5⁄16” shaft (2)
	R1-8	Ring, seal retainer, 3⁄8” shaft (2)
26	AL1-8-2	Throttle stop assy., 5⁄16” i.d.: L1-8-2, S2-15, S1-21, S1-18
	AL1-10	Throttle stop assy., 3⁄8” i.d.: L1-10, S2-15, S1-21, S1-18
27	L1-8-2	Throttle stop lever 5⁄16” i.d.
	L1-10	Throttle stop lever 3⁄8” i.d.
28	S2-15	Spring, stop screw
29	S1-21	Stop screw, 10-32 x 3⁄4”
30	S1-18	Pin screw, throttle stop
31	AL1-7-1	Throttle lever with S1-17, L1-7-1
	AL1-9-1	Throttle lever with S1-26, L1-9-1
32	L1-7-1	Throttle lever
	L1-9-1	
33	S1-17	Screw, 10-24 x 5⁄8”
	S1-26	Screw, 12-24 x 5⁄8”
34	G1-19	Gasket, 1 1⁄2” flange
	G1-23	Gasket, 1 3⁄4” flange
	G1-24	Gasket, 2” flange

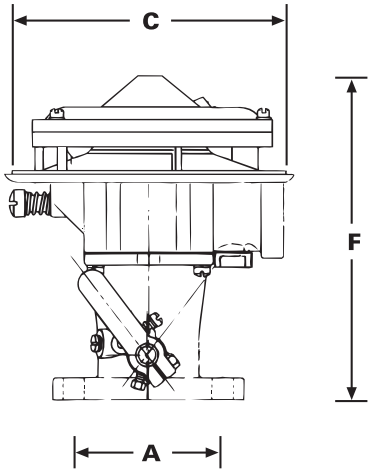


Impco

Model 225 Series -1V - Natural & LP Gas

Standard Carburetors

Standard Carburetor	Mixer	Throttle Body	A	C	F
			Center-to-Center Bolt Spacing (in.)	Mixed Air Horn Diameter	Overall Height
225-52	225M	AT2-4-2	2 15⁄16	5 13⁄16	7 1⁄4
225-54	225M	AT2-5	3 5⁄16		7 1⁄2
225-56	225M	AT2-6	3 9⁄16		
CA225-52	CA225M	AT2-4-2	2 15⁄16		7 1⁄4
CA225-54	CA225M	AT2-5	3 5⁄16		7 1⁄2
CA225-56	CA225M	AT2-6	3 9⁄16		
DG225-52	DG225M	AT2-4-2	2 15⁄16		7 1⁄4
DG225-54	DG225M	AT2-5	3 5⁄16		7 1⁄2
DG225-56	DG225M	AT2-6	3 9⁄16		

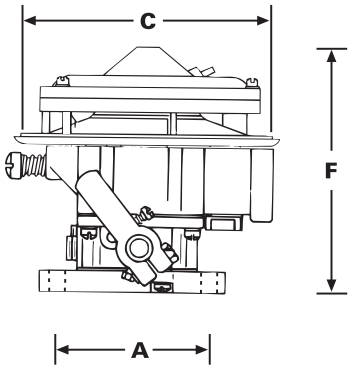


NOTES:
(1) Order air cleaner assembly separately.
(2) Order air horn separately, refer to optional equipment for specific air horn.

Model 225 Series - 2V- Natural & LP Gas

Standard Carburetors

Standard Carburetor	Mixer	Throttle Body	A	C	F
			Center-to-Center Bolt Spacing (in.)	Mixed Air Horn Diameter	Overall Height
225-11	225M	AT2-11-1	1 7⁄8 x 3 1⁄4	5 13⁄16	6 1⁄2
225-12	225M	AT2-12	2 x 3 11⁄16		
225-13	225M	AT2-13-1	3 15⁄32 x 5 5⁄32		
225-15	225M	AT2-15	(2)		
CA225-11	CA225M	AT2-11-1	1 7⁄8 x 3 1⁄4		
CA225-12	CA225M	AT2-12	2 x 3 11⁄16		
CA225-13	CA225M	AT2-13-1	3 15⁄32 x 5 5⁄32		
CA225-15	CA225M	AT2-15	(2)		

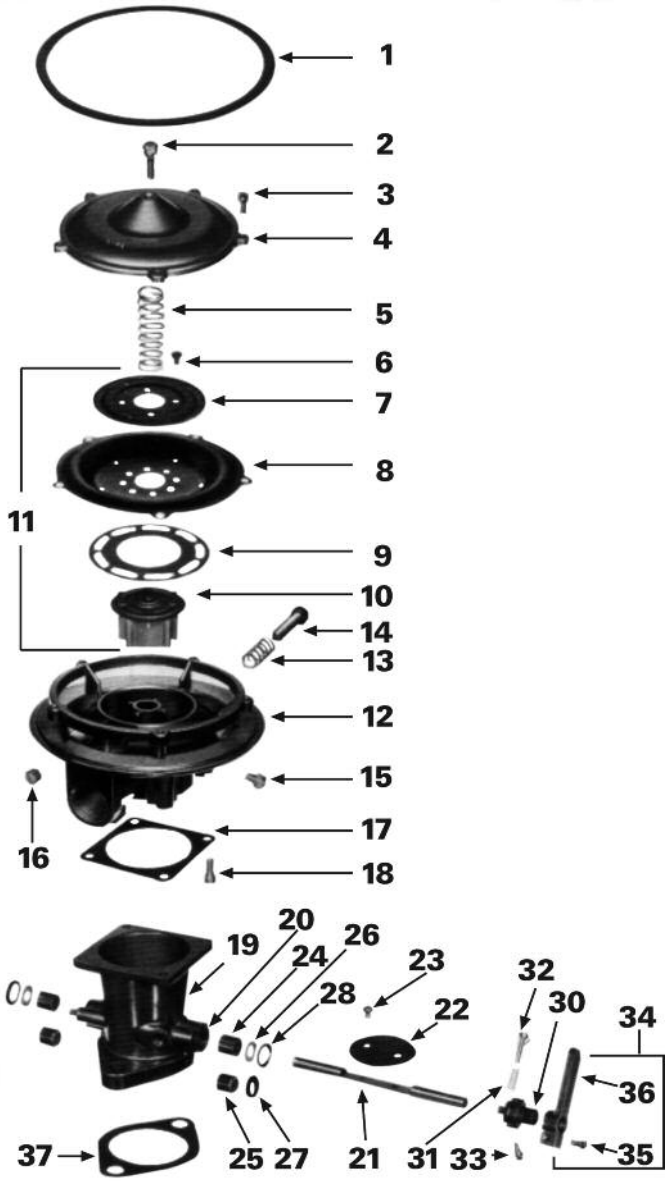


NOTES:
(1) Order air filter separately.
(2) Refer to optional equipment for dimension information.

Impco

Model 225

Ref. #	Part #	Description
1	G1-73	Gasket, mixer to air horn
2	S1-47	Screw, 1/4"-20 x 1" SEMS
3	S1-3	Screw, 10-24 x 5/8" SEMS (5)
4	C1-25	Cover, air valve
5	S2-17	Spring, air valve
6	S1-12	Screw, 8-32 x 5/16" SEMS (4)
7	P2-21	Plate, backup
8	D1-16-1	Diaphragm
	D1-16-2	Diaphragm, silicone
9	R1-17	Ring, air valve
10	BV1-12	Air gas valve assy., propane: V1-12, S4-9, V2-16
	DV1-12	Air gas valve assy., natural gas: V1-12, S4-9, V2-17
11	AV1-12	Air gas valve assy., complete w/diagram, propane
	CV1-12	Air gas valve assy., complete w/diagram, natural gas
12	AB1-23	Body assy., B1-23, V2-10, W1-18, W1-19, W1-20
13	S2-16	Spring, idle screw
14	S1-28	Idle screw
15	S1-69	Screw, 1/4"-28 x 5/16" (3)
16	P3-3	Plug, 1/8" pipe, brass
17	G1-21	Gasket, throttle body mixer
18	S1-19	Screw, 12-24 x 5/8" SEMS (4)
19	T2-4-2	Throat, 1 1/2" SAE flange
	T2-5	Throat, 1 1/4" SAE flange
	T2-6	Throat, 2" SAE flange
20	P1-5	Pin, throttle stop (2)
21	S5-2	Throttle shaft, 5/16" diameter (T2-4-2)
	S5-3	Throttle shaft, 3/8" diameter (T2-5, T2-6)
22	F2-4	Fly, 1 1/2"
	F2-5	Fly, 1 1/4"
	F2-6	Fly, 2"
23	S1-12	Screw, 8-32 x 5/16" SEMS (4)
24	B2-12	Bearing, Oilite, 5/16" i.d. (2)
	B2-13	Bearing, Oilite, 3/8" i.d. (2)
25	B2-7	Bearing, needle, 5/16" i.d. optional (2)
	B2-8	Bearing, needle, 3/8" i.d. optional (2)
26	S3-9	Seal, 5/16" shaft (2)
	S3-11	Seal, 3/8" shaft (2)
27	S3-20	Seal, internal, 3/8" i.d. optional
28	R1-9	Ring, seal retainer, 5/16" shaft (2)
	R1-8	Ring, seal retainer, 3/8" shaft (2)
29	AL1-8-2	Throttle stop assy., 5/16" i.d.: L1-8-2, S2-15, S1-21, S1-18
	AL1-10	Throttle stop assy., 3/8" i.d.: L1-10, S2-15, S1-21, S1-18
30	L1-8-2	Throttle stop lever, 5/16" i.d.
	L1-10	Throttle stop lever, 3/8" i.d.
31	S2-1	Screw, 1/4"-20 x 5/8" hex head SEMS (3)
32	S1-2	+ Screw, 10-24 x 1/2" SEMS (3)
33	S1-1	Spring, stop screw
34	AL1-7-1	Stop screw, 10-32 x 3/4"
	AL1-9-1	Pin screw, throttle stop
35	S1-26	Screw, 12-24 x 5/8"
	S1-17	Screw, 10-24 x 5/8"
36	L1-7-1	Throttle lever
	L1-9-1	
37	G1-19	Gasket, 1 1/2" flange
	G1-23	Gasket, 1 3/4" flange
	G1-24	Gasket, 2" flange

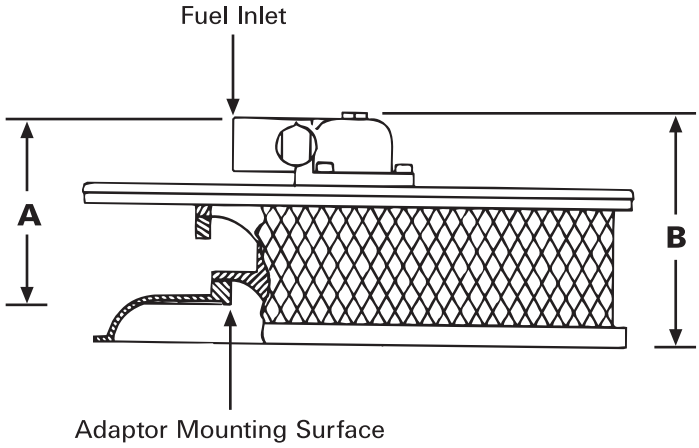


Impco

Model 300A Series

Natural & LP Gas for Dual Fuel Standard Mixers

Standard Carburetor	C Mounting Surface to Top of Fuel Inlet	F Overall Height
CA300A-M	3 1/2	4 1/8
CA300A-M-2		
CA300A-1		
CA300A-1-2		
CA300A-20M		
CA300A-20M-2		
CA300A-21		
CA300A-21-2		
CA300A-22		
CA300A-22-2		
CA300AM-50-2		
CA300AM-51-2		
CA300A-52-2		
CA300AM-70-2		
CA300A-71-2		
CA300A-72-2		
FB300AM-2		
FB300AM-50-2		



Complete mixer without air filter

Complete mixer with 14" air filter

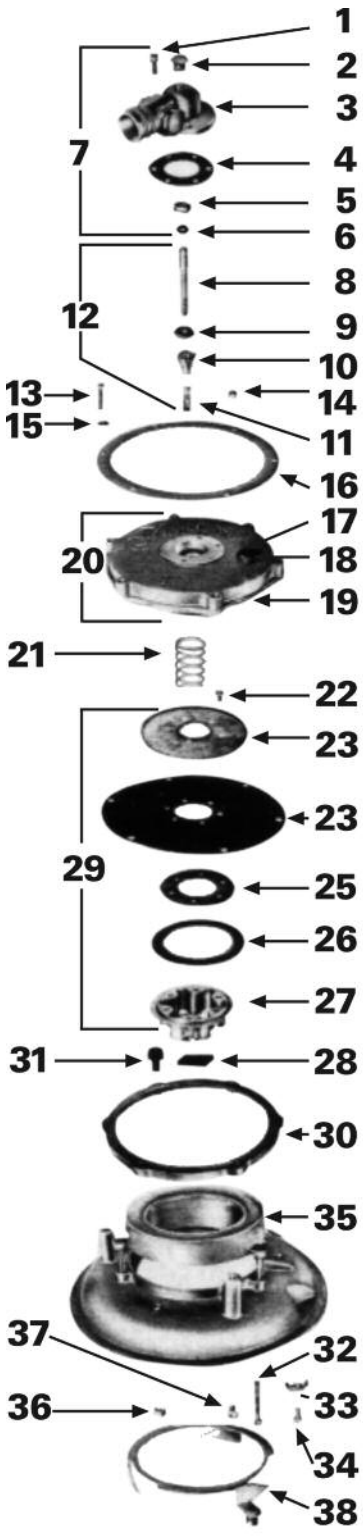
Complete mixer with 10" air filter

Impco

Model 300A Series 1 & 50

Ref. #	Part #	Description
1	S1-3	+ Screw, 10-24 x 5⁄8" SEMS (3)
2	P3-2	Plug, idle adjustment
3	AE1-4	Elbow with power adjustment: E1-4, V2-9, W1-12, W1-14, W1-15
4	G1-2	*+ Gasket, gas elbow
5	R1-93	*+ Ring, seal retainer
6	S3-	*+ Seal, idle screw
7	BE1-4-1	Elbow assembly complete: P3-2, AE1-4, R1-9, S3-3
8	S1-15	Screw, idle adjustment
9	S4-2	* Seat, gas valve (CA300A only)
	S4-20	+ Seat, gas valve (CA300A-50 only)
10	V2-11	Valve, gas metering (CA300A only). Refer to chart for correct gas valve.
	V2-39	Valve, gas metering (CA300A-50 only). Refer to chart for correct gas valve.
11	S2-3	Spring, gas valve
12	AV2-11	+ Gas valve assy. complete: S1-15, S4-2, V2-11, S2-3 (CA300A only)
	AV2-39	+ Gas valve assy. complete: S1-15, S4-20, V2-39, S2-3 (CA300A-50 only)
13	S1-6	+ Screw, 10-24 x 1" (3)
14	N1-3	*+ Nut, dome 10-24 (3)
15	W1-2	+ Washer, No. 10 light flat (6)
16	G1-	*+ Gasket, filter cover
17	R2-	+ Rivet, vent valve
18	V1-1	+ Valve, cover vent
19	C1-2	Cover, diaphragm (CA300A only)
	C1-2-3	Cover, diaphragm (CA300A-50 only)
20	AC1-2	Cover assy., diaphragm w/vent valve: R2-2, V1-13, C1-2 (CA300A only)
	AC1-2-3	Cover assy., diaphragm w/vent valve: R2-2, V1-13, C1-2-3 (CA300A-50 only)
21	S2-	+ Spring, air valve
22	S1-1	Screw, 8-32 x 5⁄16" SEMS (4)
23	P2-	Plate, diaphragm backup
24	D1-1-1	* Diaphragm, air valve
	D1-1-2	* Diaphragm, air valve, silicone
25	G1-1	* Gasket, air valve
26	R1-	Ring, air valve
27	BV1-1	Valve, air metering: V1-10, L1-3, B3-24
28	L1-	* Lock, nylon idle adjustment
29	AV1-10-1	+ Air valve assy., complete w/diaphragm: S1-12 (6), P2-1, D1-1-1, G1-15, R1-2, V1-10, L1-3, B3-24 (CA300A only)
	AV1-10-2	+ Air valve assy., complete w/silicone diaphragm: S1-12 (6), P2-1, D1-1-2, G1-15, R1-2, V1-10, L1-3, B3-24 (CA300A & CA300A-50)
30	R1-3	Ring, diaphragm support (CA300A only)
	R1-40	Ring, diaphragm support (CA300A-50 only)
31	S1-5	Screw, 1⁄4"-20 x 5⁄8" hex head SEMS (3)
32	S1-4	+ Screw, 10-24 x 1⁄2" SEMS (3)
33	C2-1	Clamp, Boden wire
34	S1-8	Screw, 10-32 x 5⁄8" SEMS (3)
35	AB1-2	Base assy., complete: L1-2, B1-2, S2-1 (3), P1-1 (3), (CA300A only)
	BB1-2	Base assy., complete: L1-2, B1-2, S2-1 (3), P1-1 (3), (CA300A-50 only)
36	N1-5	Nut, square, 1⁄4"-20
37	S1-69	Screw, 1⁄4" x 5⁄16" (plug)
38	7C2-2	Cam assembly: C2-2, W1-2, S1-7

* Indicates components of minor repair kit.
\+ Indicates components of major repair kit.



Repair Kits

Part #	Description
RK300MI - 1/20-2	Minor repair kit
RK300MI - 50/70-2	
RK300MA - 1/20-2	Major repair kit
RK300MA - 50/70-2	

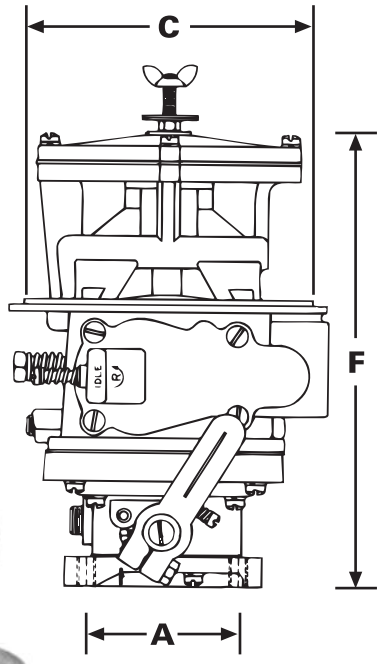
Impco

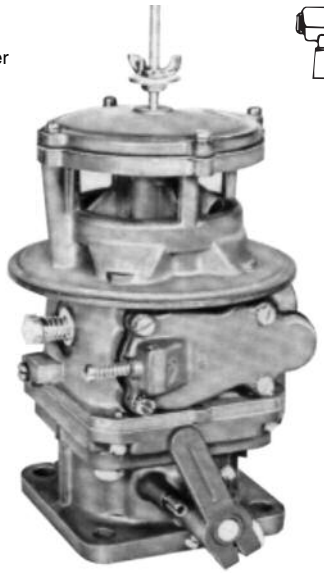
Model 425 Series

Standard Carburetors for Natural & LP Gas

Standard Carburetor		Mixer	Throttle Body	A Center-to-Center Bolt Spacing. (in.)	B Mixer Air Horn Diameter	C Overall Height (in.)
1V	CA425-2	CA425M	AT2-7	2 7⁄8	5 1⁄8	8 3⁄8
	CA425-4		AT2-8	3 1⁄4		
2V	CA425-10		AT2-15	SEE NOTE		7 3⁄4
	CA425-12		AT2-11-1	1 7⁄8 x 3 1⁄4		
	CA425-14		AT2-12	2 x 3 11⁄16		
	CA425-16		AT2-13-1	3 15⁄32 x 5 5⁄32		

(1) Reference diagram pg.3
(2) Indicates silicon diaphragm
(3) 2V applications require additional adapter between throttle body and CA425M Mixer





(425-1V Illustrated)

Impco

Lean Idle Condition

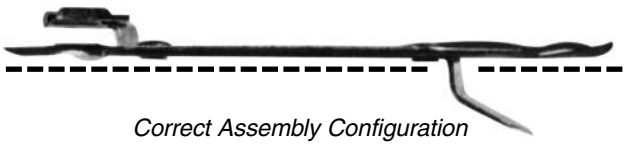
Model 425 Series

The pictures of the idle diaphragm assemblies show a correct and an incorrect assembly configuration. The assembly with the straight lever allows normal movement of the Viton valve off the valve seat, providing a full opening of the idle gas jet when adjusted rich. The bowed lever reduces available lift off the seat by limiting the travel. The bowed assembly can be straightened easily by bending to conform to a straight edge ruler or equivalent.

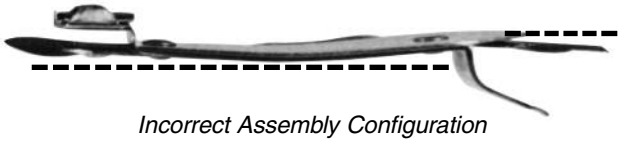
In reassembling the idle diaphragm cover to the body, the idle mixture adjustment screw must be backed out until it is engaged by only three or four threads in the cover. This will allow assembly of the cover to the body and idle diaphragm assembly without bending the tip of the lever.

After the diaphragm and cover are reassembled, the idle mixture adjustment screw may be turned in until the retainer spring is compressed about one third. With the engine running at idle, adjust the screw in or out for best idle vacuum.

If the idle mixture is set with a cold motor to the smoothest possible idle, the mixture when the engine is hot will lean out to a practically ideal mixture for minimum CO readings, without being too lean, thereby causing misfire.



Correct Assembly Configuration

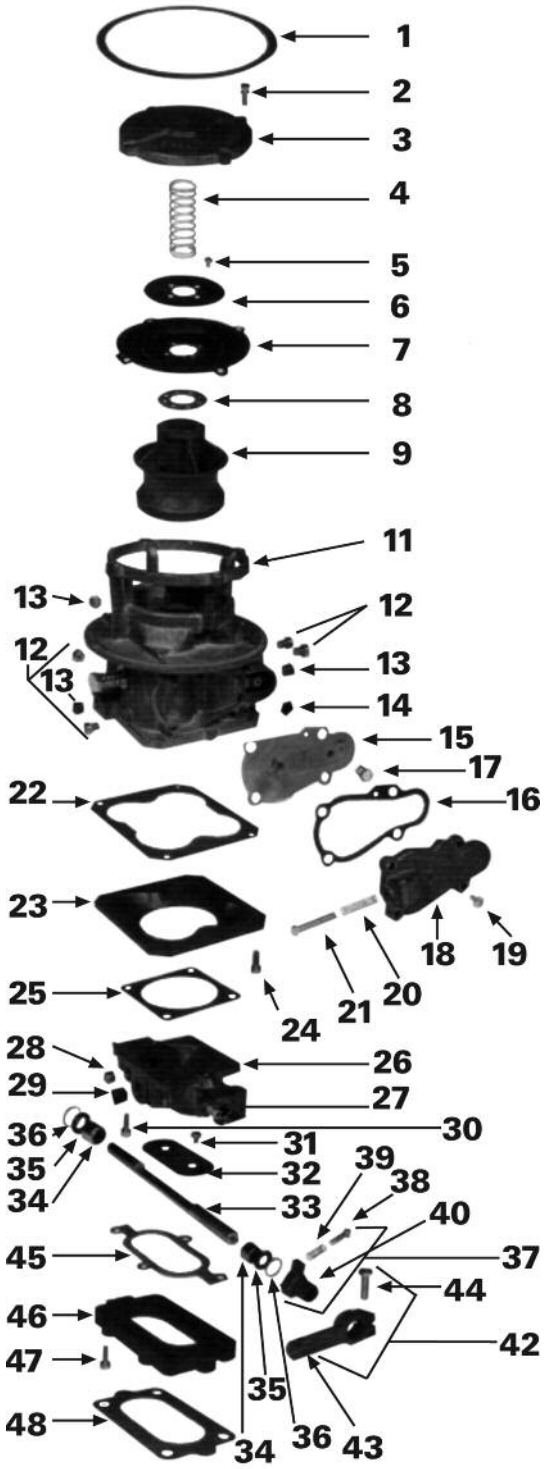


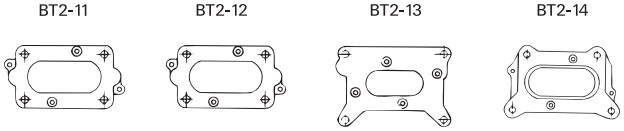
Incorrect Assembly Configuration

Impco

Model 425 Series - 2V

Ref. #	Part #	Description
1	G1-66	Gasket, air horn
2	S1-3	Screw, 10-24 x 5⁄8" SEMS (5)
3	C1-30	Cover, air valve diaphragm
4	S2-30	Spring, air valve
5	S1-22	Screw, 6-32 x 1⁄4" SEMS (4)
6	P2-22	Plate, backup
7	D1-18	Diaphragm, air valve
	D1-25	Diaphragm, air valve, silicone
8	G1-102	Gasket, air valve
9	BV1-16	Air gas valve: V1-16, V2-19, S4-14
10	AV1-16	Air gas valve assy., with diaphragm (refer to chart for correct air-gas valve assembly)
11	AB1-27	Body assy.: B1-27-2, C1-29, J1-9, S1-50, S2-16, W1-33, S3-27, V2-18, P3-3 (3), S1-69 (3), J1-5
12	S1-69	Screw, 1⁄4"-28 x 5⁄16" (4)
13	P3-3	Plug, 1⁄8" pipe (3)
14	S4-13	Seat, idle screw
15	AD1-28-1	Idle diaphragm assy.: D1-28, G1-116, L1-30, P2-23, R2-4 (2), S4-13
16	G1-116	Gasket, idle diaphragm
17	S2-24	Spring, idle valve
18	C1-31	Cover, idle valve
19	S1-40	Screw, 10-24 x 3⁄8" SEMS (4)
20	S2-89	Spring, idle adjustment
21	S1-51	Screw, 10-32 x 1 1⁄4" idle adjustment
22	G1-74	Gasket, mixer to adapter
23	A3-47	Adapter, mixer to throttle body
24	S1-19	Screw, 12-24 x 5⁄8" SEMS (4)
25	G1-21	Gasket, adapter to throttle body
26	B1-24	Body, 2B throttle
27	P1-6	Pin, throttle stop (2)
28	P3-3	Plug 1⁄8" pipe
29	P3-5	Plug 1⁄4" pipe
30	S1-19	Screw, 12-24 x 5⁄8" SEMS (4)
31	S1-31	Screw, 10-32 x 5⁄16" SEMS (2)
32	F2-10	Fly, 2B
33	S5-4	Throttle shaft, 7⁄16" diameter
34	B2-14	Bearing, Oilite, 7⁄16" i.d. (2)
	B2-9	Bearing, needle (optional), 7⁄16" i.d. (2)
35	S3-12	Seal, 7⁄16" shaft (2)
	S3-19	Seal, internal (optional), 7⁄16" i.d. (2)
36	R1-1	Ring, seal retainer (2)
37	AL1-11-1	Throttle stop assy., 7⁄16" i.d.: L1-11-1, S2-15, S1-21, S1-18
38	L1-11-1	Throttle stop lever, 7⁄16" i.d.
39	S2-15	Spring, stop screw
40	S1-21	Stop crew, 10-32 x 3⁄4"
41	S1-8	Pin screw, throttle stop
42	AL1-12-3	Throttle lever, long, with screw: L1-12-3, S1-32
43	L1-12-3	Throttle lever, long
44	S1-32	Screw, 1⁄4"-20 x 7⁄8" hex head
45	G1-44	Gasket, throttle body to flange
46	BT2-11	Flange, 1 1⁄4" 2B, with gasket
	BT2-12	Flange, 1 1⁄2" 2B, with gasket
	BT2-13	Flange, Holley 2B, with gasket
	BT2-15	Flange, 1 1⁄2" GMC 2B, with gasket
47	S1-19	Screw, 12-24 x 5⁄8" SEMS (4)
48	G1-45	Gasket, 1 1⁄4" 2B Flange
	G1-46	Gasket, 1 1⁄2" 2B Flange
	G1-47	Gasket, Holley2B Flange
	G1-49	Gasket, 1 1⁄2" GMC 2B Flange





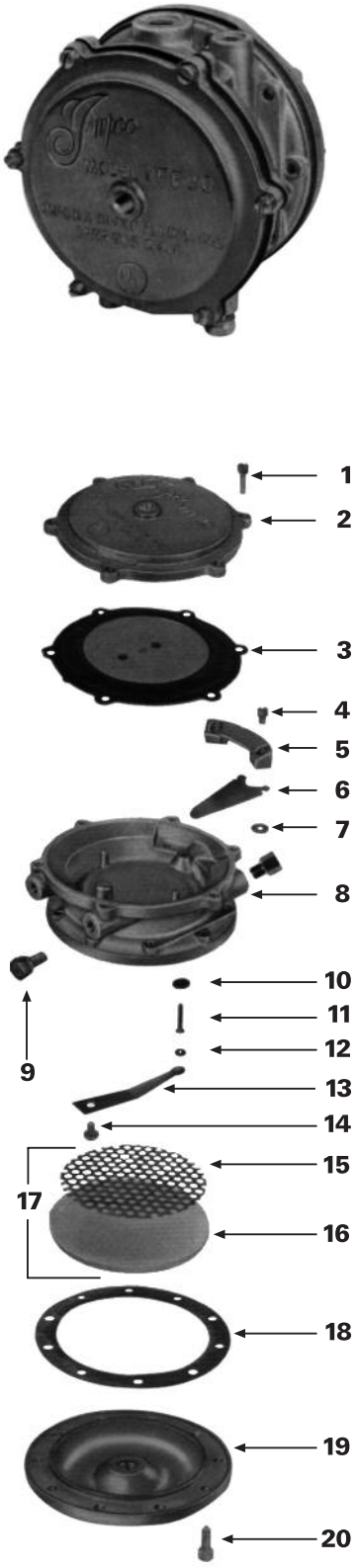
Impco

Model VFF30 Series

325 H.P. - LP Gas

Ref. #	Part #	Description
1	S1-59	Screw, 8-32 x 5⁄8" SEMS (6)
2	C1-37	Cover, diaphragm (VFF30 only)
3	BD1-27	Diaphragm assy., silicone: D1-27, P2-28 (2), R2-4 (2)
4	S1-7	Screw, 8-32 x 1⁄4" (2)
5	F3-2	Fulcrum
6	L1-39	Lever, valve operating
7	W1-42	Washer, seal retaining
8	AB1-34	Body assy.: B1-34, J1-8
9	S1-5	Screw, 1⁄4"-20 x 5⁄8" SEMS (2)
10	S4-18	Seat, valve
11	P1-15	Pin, valve operating
12	S3-42	Seal, O-ring
13	S2-40	Spring, valve
14	S1-12	Screw, 8-32 x 5⁄16" SEMS
15	S7-3	Screen, filter backup
16	F1-10	Filter
17	AF1-10	Filter assy., F1-10, S7-3
18	G1-89	Gasket, filter cover
19	C1-38	Cover, filter
20	S1-100	Screw, 12-24 x 3⁄4" SEMS (10)

NOTE:
O-ring must be secured with washer when service is required. Washer is installed through LP-gas outlet and locked in slot by pin. Silicone grease will let pin slide easily. Be sure to properly lubricate "O" ring. Refer to Service Manual for further information.



Repair Kit

Part #	Description
RK - VFF30-2	Vacuum Fuelock-Filter Repair Kit

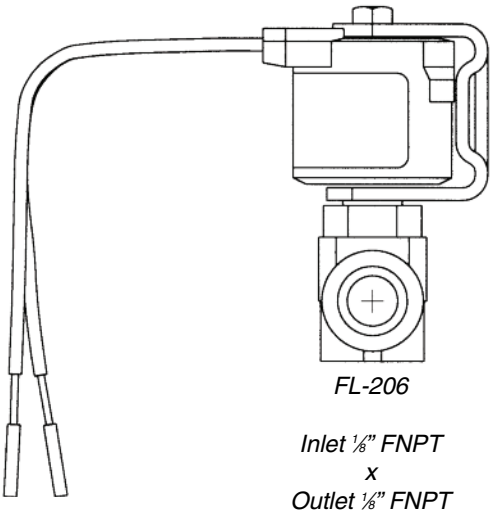
Filter

Part #	Description
F-201	Filter only for LPG 1⁄4” female inlet x 1⁄4” male outlet
408A3-2M	“Trap-It” Filter

F-201

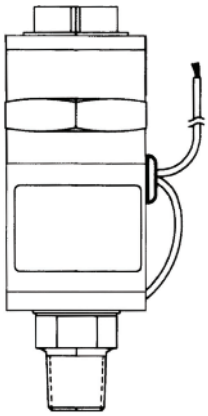
Fuel Shut-offs/Lockoffs

Part #	Fuel Type	Inlet Pressure (max)	Flow Rating	Electrical Requirement	Operating Temperature Range	Filtration Requirement	Mounting Postition	Certification
FL-206	Gasoline	30 psi	24.6 gal/h @ 2.84 psi	12 VDC	-40°F to +158°F	40 Micron	Any	UL
FL-218-12V	LPG Liquid/Vapor or Low Pressure Natural Gas	250 psi			-40°F to +250°F			
FL-418-12V							Vertical or Horizontal	



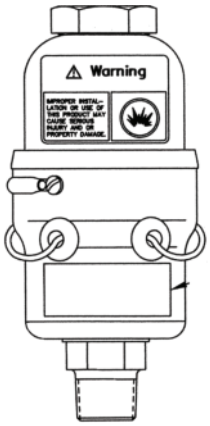
FL-206

Inlet ⅛” FNPT
x
Outlet ⅛” FNPT



FL-218-12V

Inlet ¼” FNPT
x
Outlet ¼” MNPT



FL-418-12V

Inlet ¼” FNPT
x
Outlet ¼” MNPT

Unidapt™

Impco's modular carburetor adaptor system, Light-weight die-cast components for custom-fit installation of Impco CA 125 and CA 300A series mixers.

The modular system offers selection and combination of interchangeable components to satisfy most space requirements and gasoline carburetor air horn size.

Part #	Description
CA175 & CA300	Adapter, Unidapt mixer

Part #	Description
A1-53	Adapter, to CA125 series mixers

Part #	Description
AA1-57	Adapter assy. A1-57 hood, G1-135 gasket, S1-5 screws (4)

Part #	Description
AA1-59	Adapter assy. A1-59 hood, G1-135 gasket, S1-5 screws (4)

Part #	Description
AA1-60	Adapter assy. A1-60 hood, G1-135 gasket, S1-5 screws (4)

Part #	Description
A1-62	Adapter, to 3 1⁄8" air horn

Part #	Description
A1-61	Adapter, to 5 1⁄8" air horn

Part #	Description
A1-58	Adapter, to Toyota air horn

Part #	Description
A1-54	Adapter, to 3 1⁄8" air horn

Part #	Description
A1-55	Adapter, to 2 5⁄8" air horn

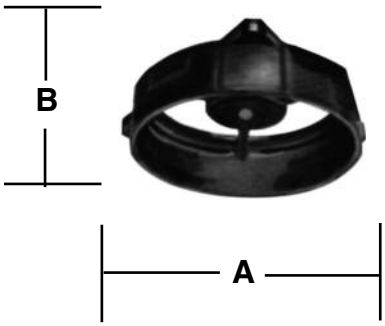
Part #	Description
A1-56	Adapter, to 2 5⁄16" air horn

Part #	Description
A1-63	Adapter, to CA-300A series mixers

A1 Series Adapters

300A and 175A mixers to gasoline carburetor air horn.

Adapter #	Dia. A	Dia. B	Description
A1-3-1	4 3⁄16”	1 1⁄4”	300A & 175A to 4 3⁄16” air horn
A1-4	2 5⁄8”		300A & 175A to Chevrolet V8 1 1⁄4” duplex air horn
A1-6	3 1⁄16”	1 7⁄16”	300A & 175A to 1 1⁄4” duplex air horn
A1-16-1	5 1⁄8”	3 3⁄8”	300A & 175A to 5 1⁄8” air horn (Gann A9-20)
A1-16-2		2 7⁄8”	300A & 175A to 5 1⁄8” air horn (Gann A9-21)
A1-39	2 5⁄8”	1 1⁄2”	300A & 175A to 2 5⁄8” air horn, high profile
AA1-40			300A & 175A to 2 5⁄8” air horn, w/clamp nuts, A1-38, N1-12 (3), S1-23 (3)
A1-41	2 5⁄16”	1 1⁄4”	300A & 175A to 2 5⁄16” air horn
A1-50-2	5 1⁄8”	1 1⁄2”	300A & 175A to 5 1⁄8” air horn offset; For GM & Chrysler requires spacer A2-73
A9-22		2 3⁄8”	300A to gasoline carburetor with 5 1⁄8” air horn



Center Stud Air Horn

Part #	Description
AA1-64-3	300A & 175A to 1982 and later Ford 5.0L throttle body EFI (Gann A9-26)

Part #	Description
AA2-46	Adapter assembly, 90 degrees, 5” to CA425M (low profile)

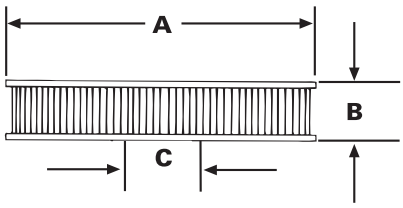
Part #	Description
AA2-40-2	Adapter assembly, 90 degrees, 5” CS to CA425M

Impco

AF1 Series

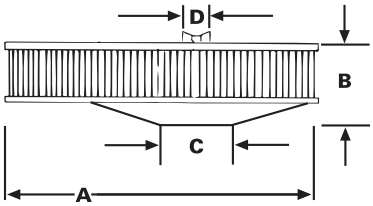
Assy. Part #	Air Flow	Applications	Filter Part #	Cover Part #	Base Part #	Stud Part #	Dimensions		
							A	B	C
AF-1-1	350 CFM	CA300A	F1-1	C1-4	*	–	9 7/8”	2 3/4”	7 1/2”
AF1-5	150 CFM	CA125	F1-5	C1-28		AS3-33	6 3/4”	2 3/8”	
AF1-11	500 CFM	CA300A	F1-9	C1-40	A2-26	–	14”	3 1/8”	
AF1-15	400 CFM	CA425	F1-15	C1-28	*	AS3-32	6 13/16”	6 5/8”	
F1-21	250 CFM	CA175A	F1-21	C1-73		–	8 1/16”	1 5/16”	

*Filter assembly fits on mixer.



Part #	Air Flow	Applications	Filter Part #	Cover Part #	Base Part #	Stud Part #	Dimensions			
							A	B	C	D
AF-14	500 CFM	CA125/CA425	F1-1	C1-48	A2-47	AS3-51	9”	7 1/2”	5 1/16”	5/8”
AF1-16-2	550 CFM	CA425	F1-9	C1-60	A2-54	AS3-41	14”	4 3/16”		1”
AF1-17-2		CA225			A2-55	AS3-52			5 27/32”	

Add approximately 5/8" to height for stud and nut.



Impco Accessories

Vacuum Power Valve

Part #	Description
VPV	Vacuum Power Valve

Vacuum Control Solenoid

Part #	Description
VCS	Vacuum Control Solenoid

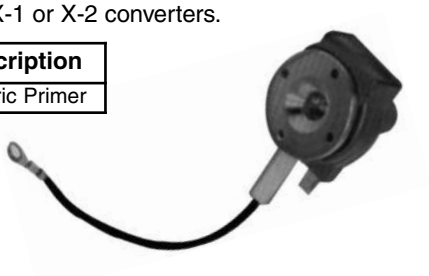
Start Assist Valve

Part #	Description
SV	Start Assist Valve

Electric Primer

Electric solenoid for remote priming of Impco models E, J, or L and OHG X-1 or X-2 converters.

Part #	Description
46-1099-2104	Electric Primer



Century

Fuelocks

Part #	Description
2384B	Filter fuelock for LPG 1/4" FNPT in/out, 12V. Chamois pack filter.
286-1794	Replacement filter kit for part # 2384B
2543A	Fuelock for gasoline. 1/8" FNPT in/out.
323-562	Replacement coil for part # 2543A, 12V
2341	Fuelock for LPG forklift application. 1/4" MNPT x 1/4" FNPT, 12V.
323-520	Replacement coil for part # 2341, 12V

2384B

2543A

Repair Kits For Century Fuelocks

Part #	For Fuelock Part #	Description
310-6	2384B	Repair kit with plunger
323-526		Coil only, 12V
323-529		Coil & cover assembly, 12V
323-520	2341	Replacement coil & cover, 12V
323-562	2543A	Replacement coil & cover, 12V

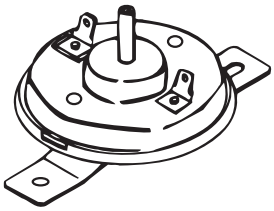
2341

Universal Bulkhead

Part #	Description
2655	Universal bulkhead - Filter for LPG. Two openings for inlet side to accomodate hydro stat relief valve. 12V. Chamois pack filter.
286-1794	Replacement filter kit

Approved Vacuum Switch

Part #	Description
140-10	Vacuum switch will not allow LPG lock-off to open until engine is running or cranking.



Century

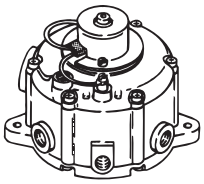
Converters

Century offers a complete line of straight fuel carburetors for highway and industrial use. Call for additional information on your particular application. Additional literature is available.

Century offers a full range of converters to cover every application need. These converters can be used for either straight fuel or dual fuel installations. All units are available with solenoid primer.

Model G-85

Part #	Description	Repair Kit #
2335B	Applications up to 85 HP	286-1554

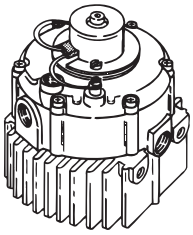


Model M-6

Part #	Description	Repair Kit #
2504A	Large engine application up to 350 HP	286-1688

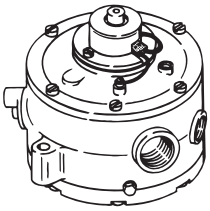
Model G-85A

Part #	Description	Repair Kit #
2380	Air heated converter for engines up to 85 HP	286-1554



Model H

Part #	Description	Repair Kit #
1477B	Small engine application up to 135 HP	286-1301



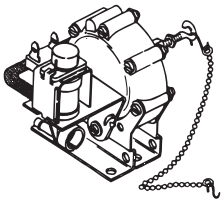
Century Converter Repair Kits

Part #	For Convertor Model #
286-1301	H
286-1332	M5
286-1554	G-85
286-1688	M6

Century Speed Control

Can be used for any application where a consistent fast idle speed is repeatedly required. It is designed especially to control engine speed while pumping from a bulk truck.

Part #	Description
2229B	Century Speed Control

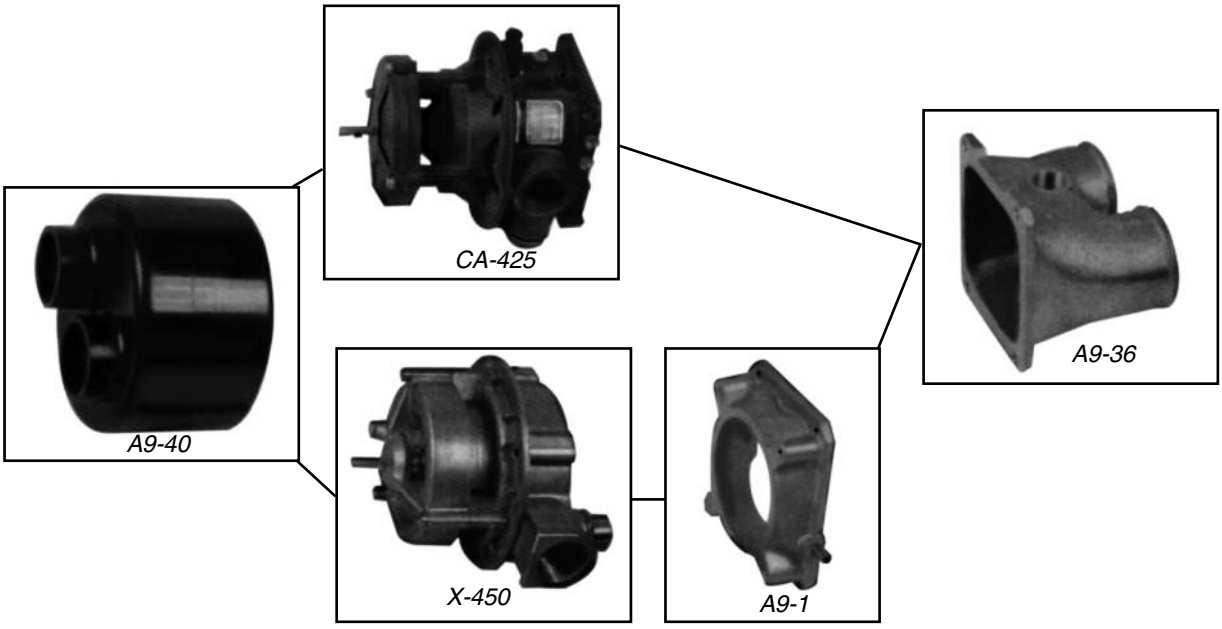


Gann

Adapter Systems

Part #	Inlets	Description
A9-40	Has two 2 1/4" diameter inlets for connection to OEM air box.	Nylon/composite material. 3" high.

How Gann Adapter Systems Work ...



Gann

Adapters

Part #	Description
A9-12	Mounts the IMPCO CA-225 to TB9-1 throttle body. Non-offset to facilitate installations where air cleaner is a problem. 1⁄8" high.

Part #	Description
A9-16	Mounts the CA-300A duel fuel mixer to the IMPCO CA-225 bolt spacing. Gasket and screws provided. 2 3⁄4" high.

Part #	Description
A9-19	CA-125 to CA-225 bolt pattern. 3⁄4" high.

Part #	Description
A9-13	Mounts to TB9-3 throttle body for IMPCO CA-425 application. Cannot be used on original gasoline throttle bodies. Has primary vacuum port. Gasket and screws provided. 1⁄8" high.

Part #	Description
A9-17	Mounts CA-300A to Ford Motorcraft carburetor by removing the original air horn and replacing with this adapter. Gasket and screws provided. 1 1⁄4" high.

Part #	Description
A9-20	Mounts IMPCO CA-300A to existing gasoline carburetor with a 5 1⁄8" air horn. 3 1⁄2" high.

Part #	Description
A9-15	Mounts the CA-300A duel fuel mixer to the IMPCO CA-425 bolt spacing. Gasket and screws provided. 1 3⁄4" high.

Part #	Description
A9-18	Mounts on CA-125 carburetor and provides for the mounting of the original air cleaner on GM V-6 engines. 2 1⁄4" high.

Part #	Description
A9-21	Mounts the CA-300A to existing gasoline carburetor. 2 3⁄4" high.

Gann

Adapters

Part #	Description
A9-22	Mounts the IMPCO CA-300A to existing gasoline carburetor with a 5 1⁄8” air horn. 2 3⁄8” high.

Part #	Description
A9-28-3	Fits GM-220 fuel-injected carburetors, including: 5.0L, 5.7L, and 7.4L. Mounts IMPCO CA-425 on gasoline throttle body. Allows use of original air cleaner.

Part #	Description
A9-31-2	Allows installation of IMPCO CA-300A on GM fuel injection throttle body. For straight LPG/NG applications. Comes with gasket.

Part #	Description
A9-26	Adapts IMPCO CA-175 and CA-300A to Ford port-injected engines.

Part #	Description
A9-29	Allows the use of the OHG X-450 on any gasoline carburetor with 5 1⁄8” air horn when combined with Glenn adapters A9-20, A9-21 or A9-22. Steel.

Part #	Description
A9-32	Mounts IMPCO CA-425 on gasoline throttle body with original air cleaner. Fits 1990 GMC, 366, and 427 c.i.d. fuel injection.

Part #	Description
A9-27	Connects IMPCO CA-300A to air induction system on Ford fuel-injected systems large and small hosed plastic/nylon composition.

Part #	Description
A9-30	Mounts IMPCO CA-425 on TB9-1. Screws and gasket included.

Part #	Description
A9-34	Nylon/plastic air shroud connects the dual-hose OEM air induction system to an X-450 or CA-425 mixer.

Gann

Adapters

Part #	Description
A9-35	Mounts IMPCO CA-225 on Ford 3.0L EFI engines. 45 degree adapter mounts mixer on mass air flow sendor in horizontal position. Mounting screws included. Recommended air filter: F9-4.

Part #	Description
A9-37	Mounts IMPCO CA-225 on Ford 4.0L EFI engines. 45 degree adapter mounts mixer on mass air flow sendor in horizontal position. Mounting screws included. Recommended air filter: F9-4.

Part #	Description
A9-43	Adapts OHG X-450 mixer to GM throttle bodies for dedicated UG/NG conversions. 1 3⁄8” high.

Part #	Description
A9-36, AA9-36	Allows in-line mounting of CA-425 mixer on Ford V-8 EFI engines. Two 2 1⁄4” diameter hose inlets. A9-36 adapter only, AA9-36 adapter w/gasket and screws.

Part #	Description
A9-38, AA9-38	Adapter for large Ford port injection engines, providing two-hole (2 1⁄4” diameter) inlets to CA425. Has two 1⁄2” NPT bosses for vent line. A9-38 adapter only, AA9-38 w/adapter and screws.

Part #	Description
A9-44	Mounts 300-A off-center on 5 1⁄8” air horn in GM throttle body applications. 3 3⁄4” high.

Part #	Description
A9-42	Allows use of IMPCO 200 IFB mixer on 4.6L EFI Ford/Lincoln/Mercury products. Brass fitting included to create branch tee for idle speed control. Mixer must be drilled and tapped 1⁄4”-20 for VF-2 vacuum port. 2” high.

Gann

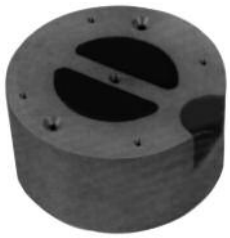
Adapters

Part #	Description
A9-45	Connects dual-hose Ford intake to direct CA-300A. Plastic.

Part #	Description
A9-49	Allows use of CA225 on Ford 5.0/5.8-liter engines. Cast aluminum.

Part #	Description
AA9-52	90 degree adapter to connect 4" hose to 5 1⁄8" air horn. Cast aluminum.

Part #	Description
A9-46	Connects dual-hose Ford intake to 225. Molded plastic.



Part #	Description
A9-50	Mounts OHG X-450 mixer on GM vehicles with 5 1⁄8" air horns such as 4.3-, 5.0-, and 5.7-liter trucks and vans. Mounts on either single stud or dual stud throttle bodies. 2 3⁄4" high.

Part #	Description
AA9-54	Right-angle mounting of CA-425 on 5 1⁄8" air horn. 4 1⁄4" high.

Part #	Description
A9-48	Mounts CA225 on 4.9-liter Ford engines. Cast aluminum.

Part #	Description
A9-50-2	Mounts X-450 on GM vehicles with 5 1⁄8" air horns in dedicated conversions. Same applications as A9-50, but low profile. 7⁄8" high.

Part #	Description
AA9-55	90 degree mounting of IMPCO CA-425 on 5 1⁄8" air horn. 1⁄2" taller than A9-54. 4 3⁄4" high.

Gann

Adapters

Part #	Description
AA9-56	90 degree mounting of IMPCO CA-425 on 5 1⁄8” air horn. Offset, low profile.

Part #	Description
A9-58	Adapts OHG X-450 to 3 1⁄4” or 3 1⁄2” single hose. Steel. 1” high.

Part #	Description
A9-60-X-450	Allows use of OHG X-450 on Dodge V-10 engines. Two-part cast aluminum adapter; simply mount the X-450 on the top half, mount the bottom half on the throttle body, then assemble the two halves. Gaskets andhardware included. 1” high.

Part #	Description
A9-57	Aluminum bonnet connects Ford single-hose. 3” intake to either X-450 or CA-425.

Part #	Description
A9-59	Adapts CA-425 to 3 1⁄4” or 3 1⁄2” single hose. Steel. 1” high.

Part #	Description
A9-60-425	Allows use of CA-425 on Dodge V-10 engines. Same style as A9-60-X-450 above. Gaskets and hardware included. 1” high.

Part #	Description
AT9-13	GM Quadrajet to IMPCO CA-425. Mounts the OHG X-450 to TB9-8 throttle body and any existing throttle body utilizing the IMPCO CA-425 bolt spacing. Has vacuum port for distributor. Gaskets and screws provided. 1 1⁄8” high.

Nylon Elbows

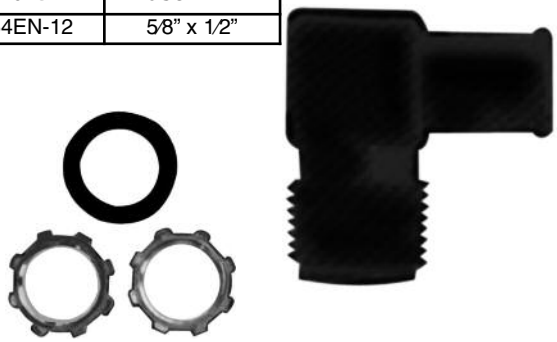
Part #	Hose - NPT
53 EN	5⁄8” x 3⁄8”
54 EN	5⁄8” x 1⁄2”
84 EN	1” x 1⁄2”
86 EN	1” x 3⁄4”
88 EN	1” x 1”
1008 EN	1 1⁄4” x 1”

Nylon Straight

Part #	Hose - NPT
53SN	5⁄8” x 3⁄8”
86SN	1” x 3⁄4”
88SN	1” x 1”

Nylon Crankcase Vent Fitting Assembly

Part #	Hose - NPT
54EN-12	5⁄8” x 1⁄2”



Nylon Fuel Pump Plate

Gasket is included.

Part #	Hose - NPT
622 N	1 3⁄4” bolt center

Zinc Straight Hose Nipples

Zinc material, die-cast and machined.

Part #	Hose - NPT
86 SZ*	1" x 3/4"
88 SZ*	1" x 1"

*Also available in nylon

Zinc

Zinc Hose Elbows

Die-cast, machined zinc material unless otherwise noted.

Part #	Hose - NPT
44 EZ	1/2" x 1/2"
53 EZ*	5/8" x 3/8"
54 EZ*	5/8" x 1/2"
56 EZ*	5/8" x 3/4"
84 EZ*	1" x 1/2"
88 EZ*	1" x 1"

*Also available in nylon

Brass

Zinc & Nylon

Brass Hose Elbows

All brass fittings produced from extruded bar stock.

Part #	Hose - NPT
52 EB	5/8" x 1/4"
53 EB*	5/8" x 3/8"
54 EB*	5/8" x 1/2"

*Also available in nylon

Brass Straight Hose Nipples

All brass fittings produced from extruded bar stock.

Part #	Hose - NPT
53 SB*	5/8" x 3/8"
54 SB*	5/8" x 1/2"

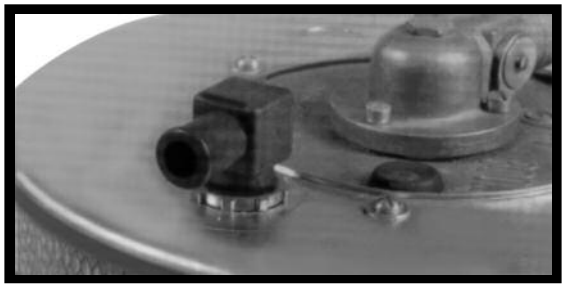
*Also available in nylon

Brass

Crankcase Vent Fitting Assemblies

Illustrated is the Impco 300 Mixer with Gann 54EN-12 fitting to adapt crankcase ventilator hose. Includes 2 jam nuts and gasket. Zinc material unless otherwise noted.

Part #	Hose - NPT
44E - 12	1/2" x 1/2"
54E - 12	5/8" x 1/2"
54EN - 12 (Nylon)	
64E - 12	3/4" x 1/2"



Plastic Tie Straps

Plastic tie strap - positive lock. 7 inches long.

Part #	Description
SST2	Positive lock, 7 inches long

Compression Connector

Part No. 68A - Tubing to male pipe.

Part #	Description
68A-5A	5⁄16” x 1⁄8”
68A-6A	3⁄8” x 1⁄8”

Fuel Pump Block Off Plates

Part #	Description
622	1 3⁄4” bolt centers (7⁄16” thick), includes gasket
622-N	2 5⁄8” bolt centers includes gasket
613-A	2 7⁄8” bolt centers (7⁄16” thick), includes gasket

622

622-N

613-A

Water Hose Connections

Part #	Description
6655YN	Universal water Y 3⁄4” x 5⁄8” (nylon)

6655YN

Clamps

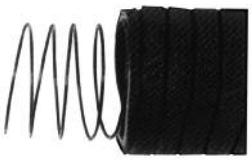
Part #	Range
5706	3⁄8” - 5⁄8”
5708	7⁄16” - 1”
5710	1⁄2” - 1 1⁄16”
5712	1⁄2” - 1 1⁄4”
5716	3⁄4” - 1 1⁄2”
5724	1 1⁄16” - 2”

Hose Clamps
Worm gear clamps

Vapor Hose

Neoprene lined, oil and heat resistant, coil wire support permits free flow regardless of degree of bend. This is a non-porous vapor hose for LP gas and natural gas.

Part #	I.D.
CVH-058	5⁄8”
CVH-100	1”
CVH-114	1 1⁄4”



NOTE:
CVH-100 available in 25ft. or 50 ft. coils

Water Heater Hose

Single braid of nylon reinforcement, oil and grease resistant.

Part #	I.D.
4230T-058	5⁄8”

Vacuum Hose

Part #	I.D.
60-465	3⁄16”

Vacuum Y

Part #	I.D.
60-3015	1⁄4” x 1⁄4” x 3⁄16”

Bulkhead Fittings

Part #	Description
T443	1⁄4” NPT 2 ways x 3⁄8” flare
T444	“T” 1⁄4” NPT 3 ways
STF-33	Straight bulkhead fitting 3⁄8” flare x 3⁄8” flare
PV-3866	Bulkhead tee w/relief selpac

STF-33

T443

T444

PV-3866

Stainless Steel Wire Braid Hose and Fittings

Developed for applications wherever a strong, corrosion resistant LPGas hose is desired. The special low extract tube handles propane or butane in liquid and gas form.

WARNING!!: For LP and Natural Gas use only! Do not use in anhydrous ammonia or refrigeration applications! Do NOT use male swivel couplings or any type of couplings that use O-Ring sealing surfaces!

U.L. 21 Dayco. Series 7243 w/cloth cover

Size I.D.	Part Number
1/4"	SS25UL-4
5/16"	SS6-UL
13/32"	SS25UL-8
1/2"	SS25UL-10

Use only with Parker/Dayco series BN hose end fittings.

Hose Ends for Parker/Dayco (Series 7243) wire braid hose.

Hose I.D.	Flare Size	Description	Coupling P/N	Use with Hose
1/4"	1/4"	Straight	6FS-4	SS25UL-4
5/16"	3/8’	Straight	6FS	SS6-UL
5/16”	3/8’	90 degree	6FS-90	SS6-UL
5/16”	3/8’	45 degree	6FS-45	SS6-UL
5/16“	1/4” MNPT	Straight	6-4MP	SS6-UL
13/32"	1/2"	Straight	6FS-8	SS25UL-8
1/2"	1/2"	Straight	6FS-8-10	SS25UL-10
1/2"	5/8"	Straight	6FS-10	SS25UL-10

Plastic Primary Wire

Smooth finish thermoplastic insulation, stranded copper conductor. Provides good flexibility and color permanence. Impervious to oil, grease and diesel fumes.

Part #	Description
1160-blue	16 gauge
82165	16/2 parallel wire, 16 gauge
83165	16/3 parallel wire, 16 gauge

Boden Wire Control Cable

Part #	Description
C2-32	6 feet w/chrome “T” handle (not shown)

Primer Switch

Heavy-duty, for either 6 or 12- volts. Has two binding head screw terminals. Mounting stem has $\frac{7}{16\text{-}28}$ thread, is $\frac{3}{8}$" long.

Part #	Description
9279	Primer switch

Rocker Switch

3 positions, on-off-on, 6 terminals.

Part #	Description
5596-R	3 positions, on-off-on, 6 terminals

3 - Way Switches

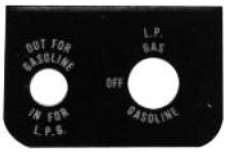
Part #	Description
5586	3 positions, on-off-on, 3 screw terminals U.L. approved for 15 amps at 125 VAC, 10 amps at 250 VAC
5592	3 positions, on-off-on, 6 screw terminals for 2 circuits
5592-1	3 positions, on-off-on, 6 spade terminals for 2 circuits
82614	3 positions, on-off-on, 9 terminals
0140-4023	3 positions, on-off-on, 12 terminals

5586

5592

Control Brackets for Dash Mounting of Controls

Part #	Description
144A	LP gas/gasoline switch bracket
244	For Boden wire and lockoff switch, 2 mounting screws included.
344	Hole diameter 3⁄8” x 1⁄2” x 1⁄2”



244

144A

344

Solderless Terminals

Part #	Description
44-5210	Ring terminal
44-3200	Push-on terminal male spade
44-9200	Push-on terminal female disconnect
44-6210	Spade or fork termnal
44-2003	Butt connector
908013	T-tap connector

44-5210

44-3200

44-9200

44-6210

42-2003

Benefits of Fresh Air

Horsepower is directly related to the temperature of the air introduced into the carburetor. For every 10° F of temperature increase above 60° F you will lose 1% of available horsepower. The opposite is also true.

Example:

A vehicle producing 1OOHP at 160°F intake air. Reducing the air temperature to 100°F by bringing in outside air will increase horsepower by 6%. The net increase would be 6HP.

Fresh Air Canisters

Includes screw package,

Part #	Description
AF9-2	IMPCO CA 300A

4" Flexible Duct

Part #	Description
H5-1	4” x 48” flexible duct

Fresh Air Inlet Shroud

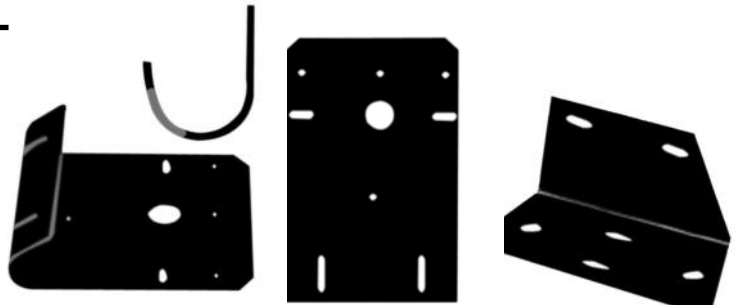
Part #	Description
S6-1	4” shroud

Converter Mounting Brackets

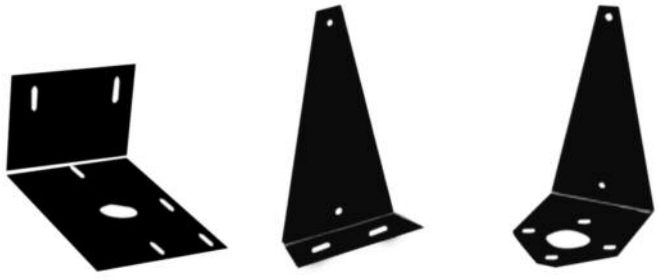
All brackets include mounting hardware.

Part #	Description
GB80	Mounts Century G85. Most forklift applications.
GB86	Mounts the Century GB85 converter on the engine carburetor mounting flange.
GB87*	Accomodates: Beam 400, 120; Century M4, M5, H; IMPCO model E. Slots are 1⁄4” x 1 1⁄2”. Includes strap brace.
GB88*	For farm tractor, industrial, large forklifts. Mounts: Beam 400, 120; Century M4, M5, H; IMPCO model E. Includes strap brace.
GB88-SP	Not shown-similiar to GB88 but with cut-out for alternator bracket mounting on Ford pick-ups.
GB89	Eight-position bracket mounts IMPCO J-Vff-30 on GB87, GB88 brackets or separately.
GB95	Mounts IMPCO model L on GB87 and GB88

* Pivot point to permit upright position on fender shield.



GB87 *GB88* *GB89*



GB95 *GB80* *GB86*

Remote Fill Receptacle and Accessories

Part #	Description
2700-R-BSS	Remote fill receptacle
7647SC	Double check filler valve 3⁄4” FNPT.
SS25UL-10	Wire braid hose 1/2” ID
SS25UL-4	Wire braid hose 1⁄4” ID
6FS-10	Female hose swivel 5⁄8”
6FS-4	Female hose swivel 1⁄4”
E1-4B	1⁄4” x 1⁄4” x Male elbow
E1-10D	5⁄8” x 1⁄2” x Male elbow
U1-10E	5⁄8” x 3⁄4” x Male half union
U1-4B	1⁄4” x 1⁄4” x Male half union
3165CP	Vent Valve 1⁄4” NPT w/warning plate
PL-631-54	1⁄4” MNPT x 1⁄4” x FNPT brass fitting with #54 orifice

Note: Actual components may vary depending upon tank model and vehicle application. Please call our sales department for assistance.

Pressure Relief Vents

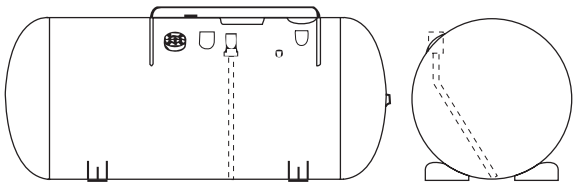
Pop-up relief vent assembly consists of nipple assembly, locknut, rubber gaskets, spring and hex nut. Easily installed on a flat surface of auto body above trunk.

Part #	Description
2995-P	Pop-up relief valve assembly - Vertical

Manchester

Pick-up, In Bed Mount Tanks

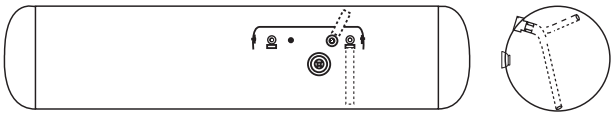
Large capacity bed mount tank for narrow bed pick-ups and trucks with utility bodies. Fits all makes & all years. Valves installed vertically. Gauge is visible through rear window for easy viewing.



Part #	Diameter	Length	W.P.	W.C.	LP	Weight
24457	20”	48”	250 PSI	58.6 gal.	46.9 gal.	164 lbs.
20597	24”	62”		109.7 gal.	87.8 gal.	301 lbs.

School Bus Tanks

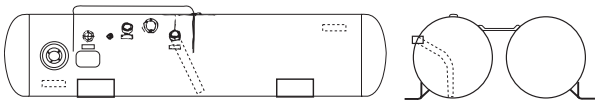
Widely used on large school buses



Part #	Diameter	Length	W.P.	W.C.	LP	Weight
20727	18”	80”	312 PSI	81.3 gal.	65.1 gal.	221 lbs.

Under Tool Box Mount Tanks

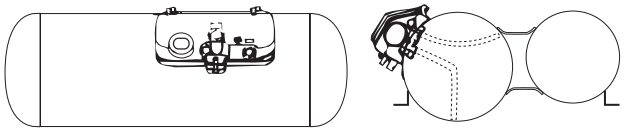
For Small pick-up trucks or narrow bed full-size pick-ups. Fits most makes and most years. May require tool box to be raised. Gauge on driver‘s side for easy viewing.



Part #	Diameter	Length	W.P.	W.C.	LP	Weight
215547	10”	48”	312 PSI	30.2 gal.	24.2 gal.	111 lbs.
26077		60” & 60”		38.0 gal.	30.4 gal.	191 lbs.
211447	12”	48” & 60”		48.8 gal.	39.0 gal.	160 lbs.
200347		60” & 60”		54.5 gal.	43.6 gal.	209 lbs.

Vapor Seal Box Tanks

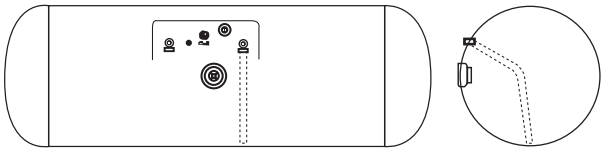
Universal manifold tank adapts well to vehicles with recessed or sloped trunk floors. Adjustable mounting brackets on 12" tank. Requires remote fill.



Part #	Diameter	Length	W.P.	W.C.	LP	Weight
237617	12" & 10”	37”	312 PSI	27.9 gal.	22.3 gal.	111 lbs.
2148471	10”	44”		27.6 gal.	22.1 gal.	149 lbs.

Slick Tanks

Very popular tank for utility vans.



Part #	Diameter	Length	W.P.	W.C.	LP	Weight	Mounting Bracket
23467	16"	42”	312 PSI	32.8 gal.	26.2 gal.	110 lbs.	2518
23097	18”		250 PSI	41.5 gal.	33.2 gal.	119 lbs.	2506
23117	20”			50.7 gal.	40.6 gal.	146 lbs.	2507
23127		48”		58.6 gal.	46.9 gal.	167 lbs.	
23567		60”		74.4 gal.	59.6 gal.	200 lbs.	

Extra Heavy Duty Strap Brackets

Available in 14" through 24" diameters.
Required for school buses.

Part #	Description
2518	16" pair
2508	18” pair
2507	20” pair
2509	24” pair

Starting has never been a serious problem when dealing with straight LP-gas engines. However, with dual fuel applications, especially those under 250 CID, there are many factors that can contribute to hard starting. These are:

1. Vacuum and air leaks.
2. Incorrect carburetor sizing.
3. Improper idle mixture.
4. Over richening by start valve.
5. Incorrect location of carburetor, regulator, and/or fuelock.
6. Improper location of electric fuelock lead.
7. Poor engine condition.
8. Incorrect spark plug gap.
9. Cold ambient air temperatures.
10. Incorrect starting technique.

Vacuum & Air Leaks

In dual fuel applications on small displacement engines, an air leak which would not bother a larger engine becomes critical, especially at cranking speed. Any leak downstream of the air/gas valve will reduce the amount it will rise off its seat during cranking.

In extreme conditions, air enters through the leak during the entire intake stroke, while the gas valve is lifted only during part of the stroke. This creates a mixture too lean to burn. A primer may furnish the added fuel around the metering valve to allow the engine to start, and with more numerous intake cycles the leak may be overcome.

Vacuum leaks may be detected by applications of small amounts of LP Gas vapor around suspected air leaks downstream of the air valve. It is suggested that an unlit propane cigar lighter be used, since a small flow is all that is necessary. If a leak is located, the engine will speed up, due to the richer mixture. This technique is quite effective around the gasoline carburetor area. Take care to do this out of doors, since adequate ventilation is a must.

Air leaks may also be found in the engine, through intake valve seals or past rings which are not seated. The orifice in the PCV valve, which is open during cranking and closed under vacuum, can add a sizable amount of air. Be sure PCV valve does close properly after engine starts.

Carburetor Sizing

Impco has found that the CA50-250L or -750L on engines of 1600cc & under will give better performance and superior mileage as well as better starting than the CA125. The CA125-250 and 260 are adequate for engines 100 to 200 CID, the CA300A for 200 to 320 CID and the CA300A-50 for 320 CID & over.

It is important to correctly size the air flow capacity of the mixer to the engine requirement.

Use of a mixer that is too large for the engine displacement makes idle adjustment extremely sensitive. When the larger mixers are applied to smaller engines, enrichment for acceleration or power occurs too high in the RPM range to be practical. The small engine cannot lift the large air valve quickly or as high as a larger engine will.

Idle Mixture Adjustment

Correct idle mixture adjustment is critical to ease of starting. This is compounded if the mixer is oversize for the engine. When the idle mixture (air by pass) adjustment is closed, the air valve will open farther at cranking. Thus the air flow volume remains the same, but gas is increased.

If the engine starts hard, check the idle mixture adjustment, following this procedure. Tighten the idle mixture screw in. If the engine starts more easily, slow the engine down while adjusting the idle mixture to prevent stalling from an over-rich mixture. Setting the idle mixture to the best idle (high vacuum) cold will give a reasonably lean but satisfactory mixture after the engine warms.

If the idle adjustment must be backed out excessively in order to obtain a smooth idle, this may be compensated for by installing an R1-29 spacer ring (for CA125 mixer). Placed between the air valve ring (R1-19) and the air valve shoulder, it raises the R1-19 by .003~, thereby increasing air flow at idle. This allows the idle screw to be adjusted in to richen the mixture, shutting off most of the bypass air and lifting the air valve farther off the seat during cranking.

Setting the idle on a CA300A mixer is touchy on a small engine because of the large gas valve. With the gas inlet elbow removed, screw the idle adjustment in until the rubber valve contacts the seat and stops turning. Back the adjustment out ¾ turn, re-install elbow. Advance idle speed adjustment screw a turn or so to keep the engine running, then start engine. The idle should be set cold or cool. Adjust the valve in and out gently to determine where the engine speeds up (best vacuum). For final setting, slow idle speed to desired setting. When testing between adjustments, place finger over the opening to the idle mixture screw to prevent air entry. Install idle adjustment plug after desired idle is obtained.

Use of the SV start assist valve for priming during cranking is helpful. However, on engines two liters and under, a restriction such as the Impco J1-20 (1/16" I.D.) should be used. If these are not available, a spark plug nut, approximately 1/16" I.D., pushed into the hose, will prevent over priming. Sizing the orifice to the engine can be checked for accuracy by energizing the SV valve separate from the starting circuit. When activated with the engine idling, it may slow the speed or actually kill the engine. However, if by opening the throttle it will start in a turn or two, the orifice size is satisfactory.

The SV should always connect to air valve vacuum, not intake manifold.

Location of Components

Mounting the converter and fuelock off the engine is desirable when carbureting 4-cylinder engines. The vibration of the engine moves the converter rapidly back and forth while the secondary diaphragm assembly tends to stay still. This causes the gas pressure to pulse, and can cause excess fuel consumption.

The added weight of an LP Gas mixer and adapter on a gasoline carburetor, if not properly braced, can combine with the vibration of a 4-cylinder engine to cause the gasoline carburetor bolts and screws, etc., to loosen, causing air leaks.

Keep the atmospheric vent of the regulator out of the direct air stream of the fan. This also can cause fluctuation of the secondary diaphragm and result in gas pressure pulsations.

Electric Fuelock Connection

Is often a source of starting trouble. Attaching the electric fuelock power lead to an ignition coil terminal. This is a weak source of current. And, it robs the ignition of needed amperage.

Engine Condition

As previously mentioned, the engine itself can be a source of air leaks. Leaking intake seals, poorly seated rings, and leakage through the PCV valve hose are problem areas to be checked. Beyond these problems, however, the engine must be in good working order. Check the engine for any leaks downstream of the air valve. Compression pressure of 150 psi or better at cranking is desirable to prevent hard starting.

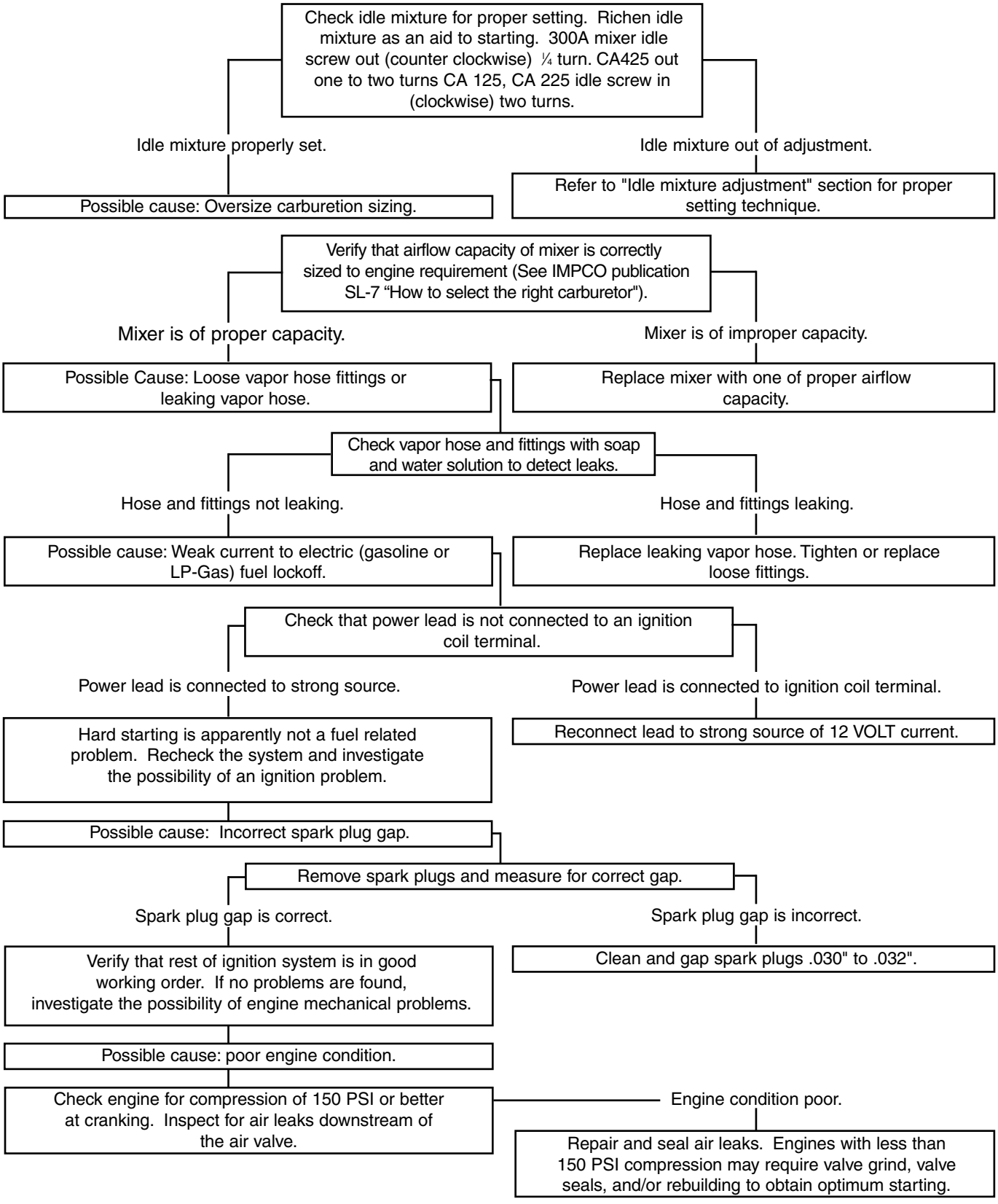
Incorrect Spark Plug Gap

Spark plugs should be in good condition and gapped to .03" to .032". A protruded nose plug is helpful if it will clear the piston at the top of its stroke.

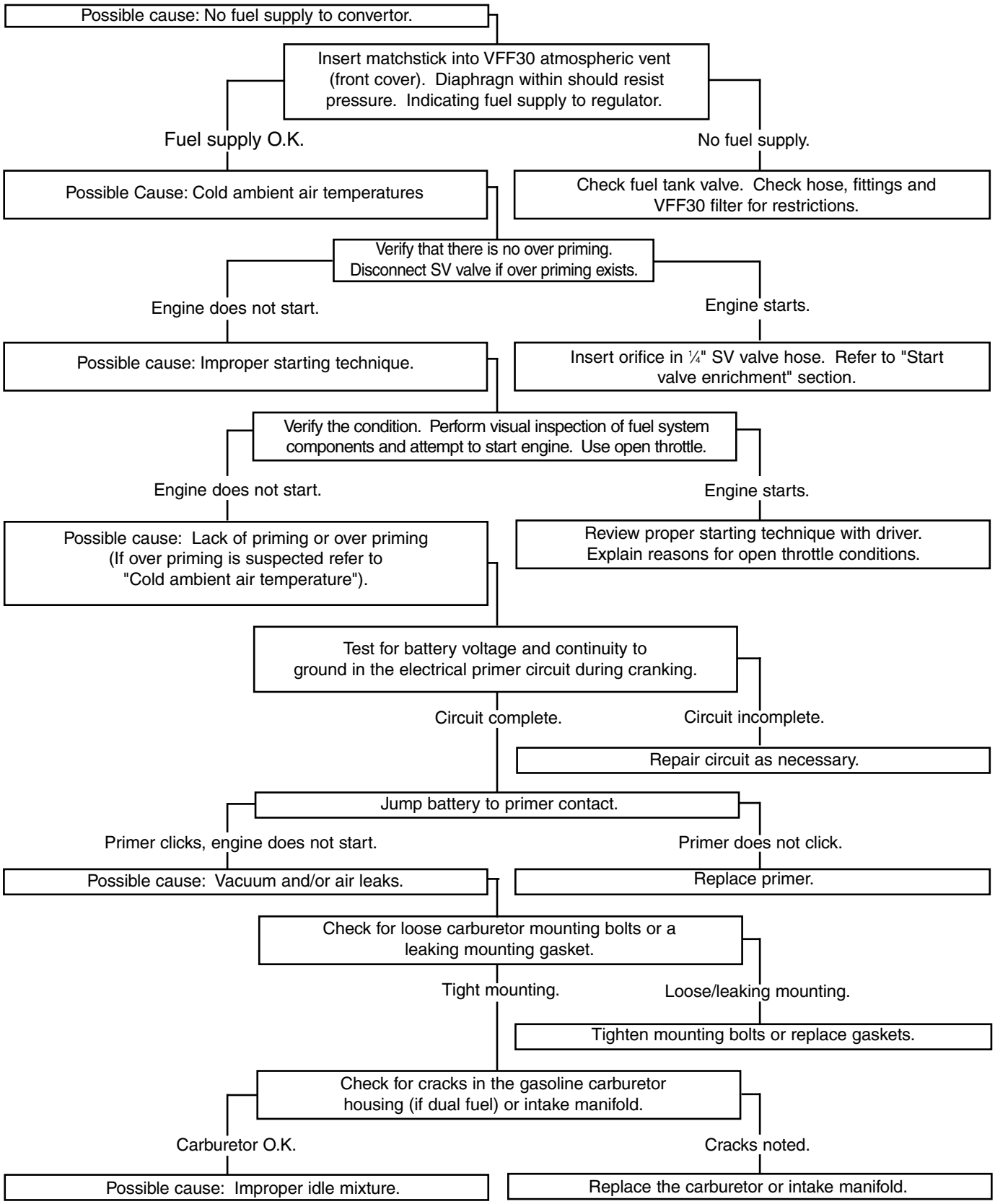
Ambient Temperature

At very cold ambient temperatures (-30°F., -34°C. or below), there may be insufficient vapor pressure in the fuel tank to supply fuel to the converter/regulator, resulting in no start or hard starting. Another condition which may prevent starting in cold weather involves over priming. If this condition is suspected, attempt to start the engine with the primer disconnected. The primer can be disconnected by removing the electrical connector or by pinching the fuel hose.

Troubleshooting — Hard Starting


Check idle mixture for proper setting. Richen idle mixture as an aid to starting. 300A mixer idle screw out (counter clockwise) ¼ turn. CA425 out one to two turns CA 125, CA 225 idle screw in (clockwise) two turns.
Idle mixture properly set.
Idle mixture out of adjustment.
Possible cause: Oversize carburetion sizing.
Refer to "Idle mixture adjustment" section for proper setting technique.
Verify that airflow capacity of mixer is correctly sized to engine requirement (See IMPCO publication SL-7 "How to select the right carburetor").
Mixer is of proper capacity.
Mixer is of improper capacity.
Possible Cause: Loose vapor hose fittings or leaking vapor hose.
Replace mixer with one of proper airflow capacity.
Check vapor hose and fittings with soap and water solution to detect leaks.
Hose and fittings not leaking.
Hose and fittings leaking.
Possible cause: Weak current to electric (gasoline or LP-Gas) fuel lockoff.
Replace leaking vapor hose. Tighten or replace loose fittings.
Check that power lead is not connected to an ignition coil terminal.
Power lead is connected to strong source.
Power lead is connected to ignition coil terminal.
Hard starting is apparently not a fuel related problem. Recheck the system and investigate the possibility of an ignition problem.
Reconnect lead to strong source of 12 VOLT current.
Possible cause: Incorrect spark plug gap.
Remove spark plugs and measure for correct gap.
Spark plug gap is correct.
Spark plug gap is incorrect.
Verify that rest of ignition system is in good working order. If no problems are found, investigate the possibility of engine mechanical problems.
Clean and gap spark plugs .030" to .032".
Possible cause: poor engine condition.
Check engine for compression of 150 PSI or better at cranking. Inspect for air leaks downstream of the air valve.
Engine condition poor.
Repair and seal air leaks. Engines with less than 150 PSI compression may require valve grind, valve seals, and/or rebuilding to obtain optimum starting.

Troubleshooting — Hard Starting


Possible cause: No fuel supply to convertor.
Insert matchstick into VFF30 atmospheric vent (front cover). Diaphragn within should resist pressure. Indicating fuel supply to regulator.
Fuel supply O.K.
No fuel supply.
Possible Cause: Cold ambient air temperatures
Check fuel tank valve. Check hose, fittings and VFF30 filter for restrictions.
Verify that there is no over priming. Disconnect SV valve if over priming exists.
Engine does not start.
Engine starts.
Possible cause: Improper starting technique.
Insert orifice in ¼" SV valve hose. Refer to "Start valve enrichment" section.
Verify the condition. Perform visual inspection of fuel system components and attempt to start engine. Use open throttle.
Engine does not start.
Engine starts.
Possible cause: Lack of priming or over priming (If over priming is suspected refer to "Cold ambient air temperature").
Review proper starting technique with driver. Explain reasons for open throttle conditions.
Test for battery voltage and continuity to ground in the electrical primer circuit during cranking.
Circuit complete.
Circuit incomplete.
Repair circuit as necessary.
Jump battery to primer contact.
Primer clicks, engine does not start.
Primer does not click.
Possible cause: Vacuum and/or air leaks.
Replace primer.
Check for loose carburetor mounting bolts or a leaking mounting gasket.
Tight mounting.
Loose/leaking mounting.
Tighten mounting bolts or replace gaskets.
Check for cracks in the gasoline carburetor housing (if dual fuel) or intake manifold.
Carburetor O.K.
Cracks noted.
Possible cause: Improper idle mixture.
Replace the carburetor or intake manifold.